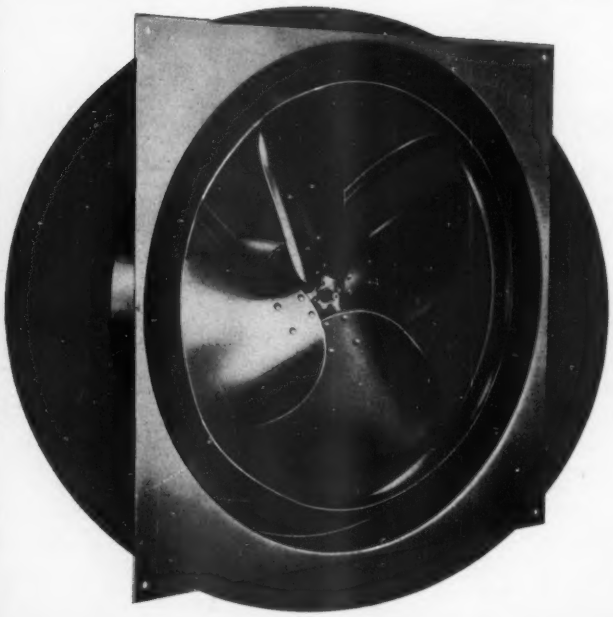
ELECTRICAL SOUTH



Hunter
SINCE 1888

NEW 1951

HUNTER EXHAUST FANS

A profitable year-round seller

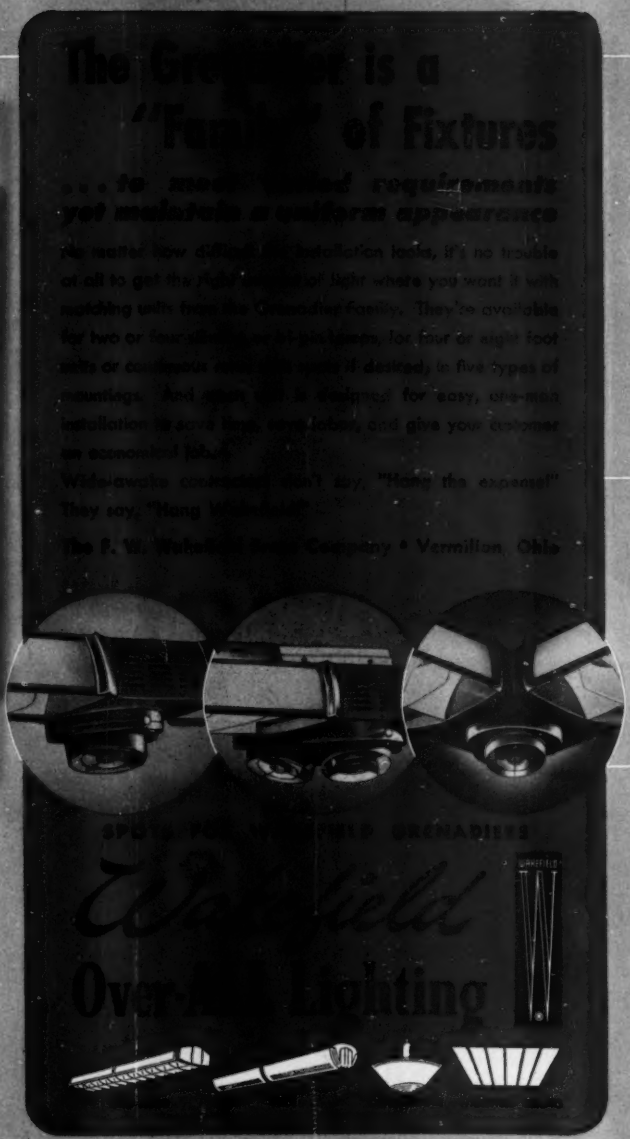
2 SIZES: 12" AND 16"
FOR COMMERCIAL AND INDUSTRIAL USES

Ask your Hunter distributor or
write us for catalog and prices

HUNTER FAN AND VENTILATING COMPANY

392 S. FRONT ST., MEMPHIS 2, TENN.

Designed for Contractors by Wakefield


The Grenadier is a
"Family" of Fixtures
. . . to meet varied requirements
yet maintain a uniform appearance
The F. W. Wakefield Brass Company • Vermilion, Ohio
SPOTS FOR WAKEFIELD GRENADIERS
Wakefield
Over-All Lighting

"VITAL STATISTICS" of the Grenadier Family

4′ units for two 40-watt bi-pin lamps

4′ units for two 36-watt slimline lamps

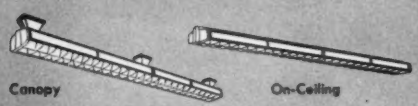
8′ units for two 72-watt slimline lamps

4′ units for four 40-watt bi-pin lamps

4′ units for four 36-watt slimline lamps

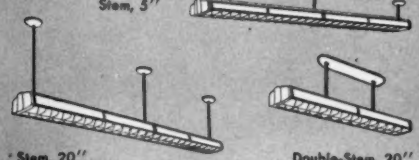
8′ units for four 72-watt slimline lamps

MOUNTINGS

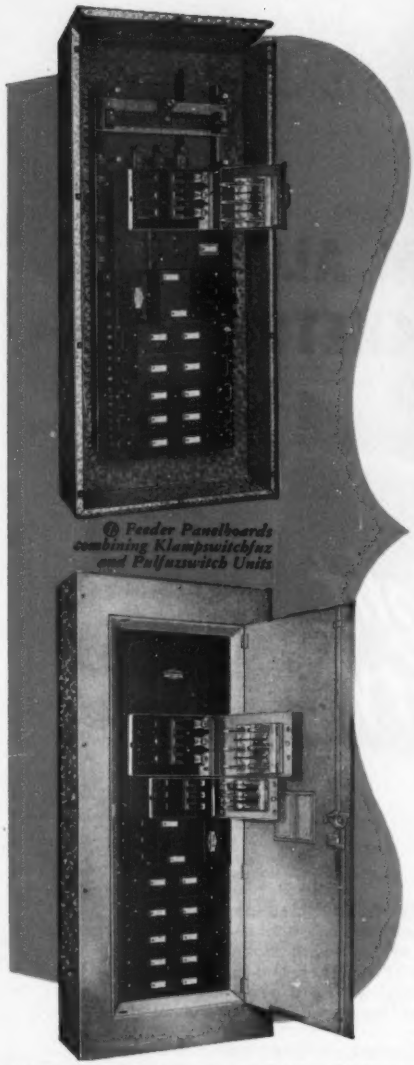


Canopy On-Ceiling

Stem, 5″



Stem, 20″ Double-Stem, 20″



Ⓕⓐ Feeder Panelboards combining Klampswitchfuz and Pulfuzswitch Units

Ⓕⓐ PULFUZSWITCH capacities: 30, 60 and 100 amps, 250 volts AC or DC, 30; and 60 amps, 600 volts AC in 2, 3 and 4 pole.

Ⓕⓐ KLAMPSWITCHFUZ capacities: 30 to 600 amps, 250 volts AC or DC; and 30 to 200 amps, 600 volts, AC in 2, 3 and 4 pole types, single or double throw.

Ⓕⓐ SHUTLBRAK capacities: 30 to 600 amps, 250 volts AC or DC; and 600 volts AC in 2, 3 and 4 pole types.

For

Efficiency, Safety and FASTER DELIVERY

It's

STANDARDIZED Ⓕⓐ FUSE-TYPE FEEDER PANELBOARDS

In times like these, when plant facilities must be expanded or modernized, Standardized Ⓕⓐ FUSE TYPE FEEDER PANELBOARDS, are particularly ideal.

Recently re-designed, inside and out, to minimum space requirements . . . without sacrificing such popular features as generous wiring space and ease of installation . . . these improved, compact feeder panelboards are built of standardized units and assembled, as required for specific application, thus *facilitating deliveries.*

Four standardized widths, ten standardized heights and three standardized depths of boxes meet any requirement. Boxes are shipped from stock . . . with removable ends to permit drilling of conduit openings on the job. Too, panels are readily installed after boxes are in position.

Two dependable Ⓕⓐ Switches . . . the Ⓕⓐ PULFUZSWITCH and the Ⓕⓐ KLAMPSWITCHFUZ . . . make these feeder distribution panelboards the finest in safety and efficiency. Both types combine switch and fuse in one unit so that current is OFF when the door is opened, or the fuse carrier removed. This makes replacement of fuses safe . . . quick . . . simple.

For operating switch requirements, Ⓕⓐ Shutlbrak Type A, Quick Make and Quick Break Interlocking Switches are available in the same standardized construction.

For more information about the standardized Ⓕⓐ Fuse-type Feeder Panelboards, talk it over with your Ⓕⓐ representative (he's listed in Sweet's).

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Frank Adam Electric Co.

Our 60th Year... ST. LOUIS 13, MISSOURI

Makers of BUSDUCT • PANELBOARDS • SWITCHBOARDS • SERVICE EQUIPMENT • SAFETY SWITCHES • LOAD CENTERS • QUIKHETER

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Volume 31 Number 12

HAPCO ALUMINUM ALLOY LIGHTING BRACKETS

TAPERED STYLE

The Hapco Tapered Style Bracket, of permanent, lightweight aluminum alloy, is gracefully tapered from a 2½ by 5-inch oval at the pole end to 1¼-inch standard pipe size at the luminaire end. The graceful upsweep provides a rise of 17-inches from the center of the pole mounting end to the outer end. The unique design gives considerably greater strength than 2-inch pipe of the same material. Note that the four foot size weighs only seven pounds ready for shipment.

The high strength aluminum alloy Pole Plate is welded to the arm to form a solid unit, and the exclusive Hubbard Keyhole Mounting Slot makes one-man mounting easy. Internal wiring is provided for by a slot in the bottom of the arm near the Pole Plate.

Standard numbers listed below are supplied with outer end reduced to 1¼-inch pipe size for slip-fitter luminaires or 1¼-inch standard pipe threaded fittings. If 2-inch pipe end is desired, please specify.

Stock No.		Nominal Length of Arm—Feet	Approximate Shipping Wt. Lbs., Each
Threaded End	Plain End		
HAL 4224	HAL 4224P	4	7.0
HAL 4225	HAL 4225P	5	8.5
HAL 4226	HAL 4226P	6	10.0
HAL 4228	HAL 4228P	8	14.5

HUBBARD ALUMINUM PRODUCTS COMPANY

MANUFACTURER OF HAPCO QUALITY ALUMINUM PRODUCTS

A Division of HUBBARD and COMPANY

6301 Butler Street • Pittsburgh 1, Pa.

ELECTRICAL SOUTH

SERVING THE 18 SOUTHERN AND SOUTHWESTERN STATES

December, 1951 — Vol. 31 – No. 12

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Wakefield LIGHTS

FAHY'S DEPARTMENT STORE

FAHY'S
ROME, GEORGIA

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ELECTRICAL CONTRACTOR
WALTER GRAY ELECTRIC CO.
ROME, GEORGIA

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LIGHTING ENGINEER
MR. C. R. MINORS
GEORGIA POWER COMPANY

FIRST FLOOR

SECOND FLOOR

Wakefield Grenadiers provide abundant light that diffuses pleasantly from white enameled louvers and plastic side panels, achieving excellent illumination levels and low brightness contrasts.

Wakefield Grenadiers are available for use with two or four 40 W bipin or Slimline lamps.

• OUR LIGHTING ENGINEERS WILL LAY OUT LIGHTING PLANS TO MEET YOUR REQUIREMENTS WITHOUT COST OR OBLIGATION TO YOU.

The complete Wakefield line—Grenadiers, Grenadier Spots, Stars and Commodores—available from

GENERAL ELECTRIC SUPPLY CORPORATION

ATLANTA — SAVANNAH — AUGUSTA
JACKSONVILLE — ORLANDO — MIAMI — TAMPA

KEARNEY Pioneers Again!

Introducing the

SQUEEZON

the NEW Pure Copper Cold Welder Connector That Eliminates Contact Corrosion

by permanently sealing out air between conductor, connector and tap transfer surfaces with tons of pressure

JAMES R. KEARNEY CORPORATION ST. LOUIS, MO.

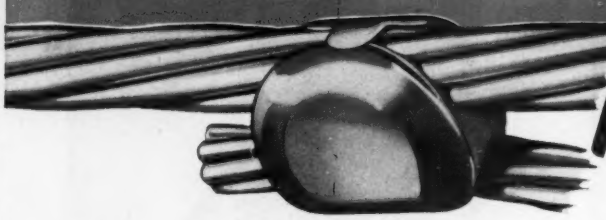
JAMES R. KEARNEY CORPORATION
4224-42 Clayton Avenue • St. Louis 10, Missouri
Canadian Plant: Guelph, Ontario

. . . turn the page for more information on the Kearney Squeezon

THE KEARNEY SQUEEZON
a Forward Step in Power Line Connection

The KEARNEY SQUEEZON

Is a Completely New, Advanced Type CONNECTOR That Gives You a Quicker, Better, More Permanent Connection



At 1/2 the Cost!

Why This New Kearney Connector Was Developed

It is an accepted fact that the major causes of connection failure are (1) overheating caused by the increased resistance of contact surface oxidation, and (2) loosening caused by line vibration and change in temperature.

Kearney set out to overcome these problems by developing a compression connector designed for today's increased loads. The Squeezon is the result!

Prevents Oxidation of the Contacting Surfaces

Each conductor slips into a rounded trough or bed in the connector which conforms to the shape of the wire. After tremendous hydraulic pressure is applied, the Squeezon is pressed around the wires so tightly that all air is permanently excluded from between transfer surfaces.

Because corrosion of these critical surfaces cannot occur and because of the pure copper composition of the Squeezon, conductivity is extremely high. Result: the temperature of the connection is kept well below the temperature of the line wire.

Now, for the first time, it is possible to construct an electrical pipe line from generator to user completely fabricated of pure, permanently connected copper.

Every Connection Is Uniformly Tight

Linemen have widely varying ideas of what constitutes a tight connection. The Kearney Squeezon removes the guesswork from line connection — each one is compressed exactly the same amount — the correct amount for perfect contact and prevention of damage to conductors. There are no "bad" connections to fail.

Costs Less to Use — Costs Less to Buy

Connections are extremely easy to make. The tool is light, simple to use and enables the lineman to work quickly. You can buy a hydraulic tool for each service truck out of the first year's savings when you use the SQUEEZON!

Specify KEARNEY PRODUCTS

The Quick, Modern SQUEEZON way...

A CLICK—and it's Done!

The KEARNEY SQUEEZON is a pure copper compression-type connector forged in a shape having an "H" cross-section. The connection is made by placing one conductor in the top half of the "H" and the other in the bottom. The sides are then coined over under tremendous hydraulic pressure — applied by pumping one handle of the SQUEEZON Tool. When a distinct click is heard the connection is then complete, permanent and a perfect electrical bond.

Write today for the big, 8-page bulletin on the Squeezon.

JAMES R. KEARNEY CORPORATION
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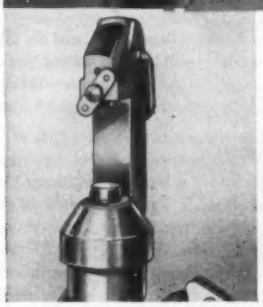
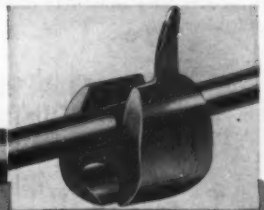
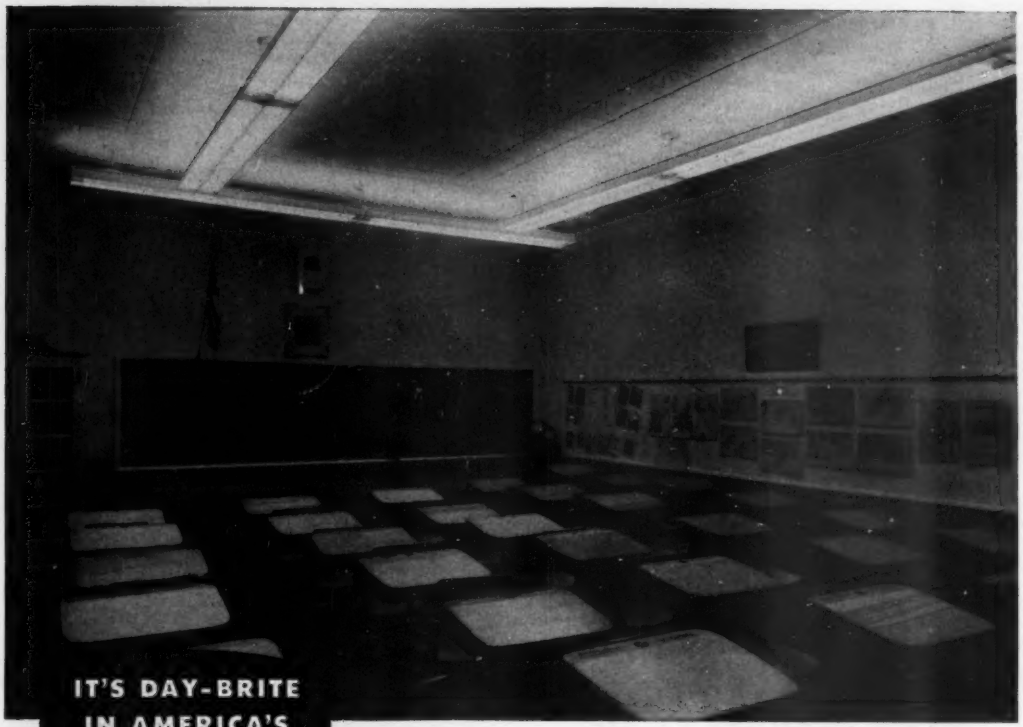




JAMES R. KEARNEY CORPORATION ST. LOUIS, MO.

Better Construction – *SAFER* Maintenance



IT'S DAY-BRITE IN AMERICA'S SCHOOLS

Anyone Can See Why Children Learn in this School

The North Glendale School in Glendale, Missouri is still another school, one of hundreds throughout America—where Day-Brite supplies modern efficient lighting.

Do teachers in your school look at a group of young *squinting* faces? Do your classrooms have a last row problem? Are your blackboards "glareboards"? Then you should do something about your school lighting now. Glare, bright reflected light, sharp color contrasts or insufficient light can cause permanent damage to strained eyes . . . does result in nervous tension and retarded learning.

Day-Brite has conducted scientific school lighting tests for years. That's why they have been able to solve school lighting problems for teachers, school principals and Public School Systems in literally hundreds of America's schools. That's why Day-Brite fixtures give classrooms the glare-free, evenly distributed light that students need. And, that's why Day-Brite has been able to design quality fixtures with the low-cost installation and maintenance features which most school budgets require. Would you like further information? Write today to Day-Brite Lighting, Inc., 5435 Bulwer Ave., St. Louis, Mo.

NOW, MORE THAN EVER

AMERICA MUST SEE WHAT IT'S DOING

IT'S EASY TO SEE WHEN IT'S

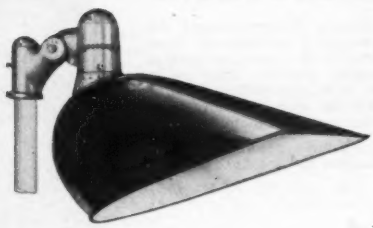
"DECIDEDLY BETTER"
DAY-BRITE
Lighting Fixtures

52

ELIPSO STANDLITE—
Expertly designed to provide protection for industrial properties.

SENTINELS OF SAFETY

APPLETON LIGHTING EQUIPMENT



DIFFUSO FLOODLIGHT—
For even illumination of service stations, athletic fields, parking lots, etc. Pole, Bracket or Crossarm mounting.

In these days of accelerated production, good light for outdoor working areas and grounds is a vital *must* for both personnel safety and plant protection. Outdoor lighting planned with Appleton Equipment is your assurance of top-notch illuminating efficiency at minimum installation, service and operating expense. Appleton Lighting Fixtures are available in the exact type and size for every industrial requirement—including hazardous locations—whether indoors or out. For the finest in illuminating fixtures specify Appleton—pace-setting manufacturer of electrical equipment for more than half a century.

STANDLITE—
The oil industry's choice for sturdy, efficient service station illumination.

THE EFU—
First and still finest fluorescent explosion-proof lighting fixture. Available for two 40 watt 48" lamps or two 100 watt 60" lamps.

PAT. NO. 2,392,202

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Resident Representatives: Binghamton, Dallas, Indianapolis, Kansas City, Orlando, Milwaukee, New Orleans, Seattle, Portland, Ore.

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APPLETON ELECTRIC PRODUCTS

CROUSE-HINDS High Efficiency LIGHTING EQUIPMENT...

Type EVF Explosion-Proof and Dust-Tight
Fluorescent Lighting Fixtures
1, 2, 3, or 4 -Lamp

. . for Hazardous Locations

Crouse-Hinds explosion-proof lighting fixtures exceed the requirements for service in highly explosive atmospheres. They are designed to operate at a temperature below the ignition temperature of the gas-air or vapor-air mixture. They are so strong that they will resist internal explosions without damage and so tight that they will prevent the escape of flames or burning gases which might ignite the surrounding atmosphere.

Crouse-Hinds dust-tight lighting fixtures assure safety in locations that are hazardous because of the presence of combustible dust.

. . . for Wet and Corrosive Location

Crouse-Hinds vaportight lighting fixtures are ideal for use in boiler rooms, powerhouses, shower rooms, tunnels, loading docks, building entrances, and all indoor and outdoor locations where exposed to moisture and rain, non-explosive vapors and gases, or non-combustible dusts.

Hundreds of industrial lighting fixtures are listed in Crouse-Hinds Condulet Catalog.

. . . for Protection

Sabotage thrives in darkness. The most reliable and cheapest form of protection against night prowlers is LIGHT! Crouse-Hinds floodlights project powerful beams of light that bathe all approaches to your property with glaring radiance, killing darkness and shadows and compelling everyone to be more visible at night than in broad daylight.

The protective power of light should be used in all important municipal and industrial locations. The floodlighting of industrial plants serves a double purpose. It helps to boost production in addition to the security it provides.

Send for your copy of Bulletin 2565, "LIGHT! Protect Your Property."

A Nationwide Distribution Through Electrical Wholesalers

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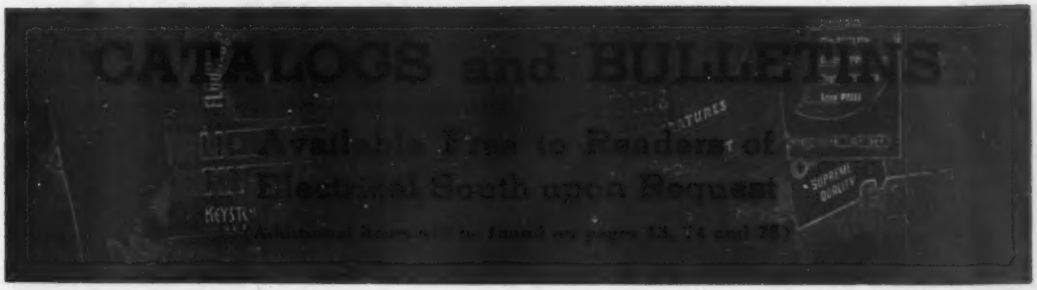


1008—Electrical Equipment. The latest edition of the Federa-log has just been issued by Federal Electric Products Co., 60 Paris St., Newark 5, N. J. This profusely illustrated catalog contains complete details of Federal's newest motor controls, safety switches, service equipment, circuit breakers, panelboards, switchboards, and busduct.

1028—Porcelain Insulators. A loose-leaf catalog of porcelain insulators and pole line hardware is available from Illinois Electric Porcelain Co., Macomb, Illinois. In addition to the pages of product specifications, the catalog contains a special section of useful tables.

1030—Condensed Lighting Catalog. This 8-page descriptive bulletin issued by Pittsburgh Reflector Co., 450 Oliver Bldg., Pittsburgh 22, Pa., describes in detail the most popular items in the Pittsburgh line of fluorescent and incandescent lighting equipment. Each item is fully illustrated and cataloged, and many are accompanied by installation drawings.

1032—Receptacles, Plugs, and Connectors. Russell & Stoll Co., Inc., 125 Barclay St., N. Y., has released a bulletin No. EL-4-46, describing the new Ever-Lok receptacles, plugs and cord connections for 30 amperes, 440 volts, a-c. Typical uses are for heavy duty industrial purposes.

1034—Building Wire. A fully illustrated 48-page booklet called "Hazard Building Wires" is now available from the Hazard Insulated Wire Works Division of The Okonite Co., Wilkes-Barre, Pa. The manual contains complete engineering information on the many types of wire and cable required by the building industry. Tables showing dimensions and weights of all cable constructions are included.

1048—Plug-In Strip. A complete revision of Catalog CF-2 has recently been published by National Electric Products Corp., Pittsburgh, Pa. This 8-page, illustrated brochure pictures the 3 ft. and 6 ft. standard lengths of the redesigned multi-outlet branch circuit assembly. Several pages are devoted to detailed instructions for cutting the Plug-In strip on the job.

1054—Fluorescent Fixtures. Catalog No. 48 illustrates the commercial, industrial and residential designs offered by the Kayline Co. Featured are troffers, glass and louver type, recessed incandescent units, and many others. The catalog is available from the Kayline Co., 2480 E. 22nd St., Cleveland 15, Ohio.

1058—Conductor Fittings. A complete catalog, illustrated and listing prices, has been issued by Penn-Union Electric Corp., Erie, Pa. Described is the company's complete line, including a wide variety of service connectors, terminals, tees, and taps; also many other types of conductor fittings.

1068—Wire and Cable. Rome Cable Corporation, Rome, N. Y., has just published a new "Bare and Weatherproof Wire and Cable" catalog, No. 22. By word and picture the story of Rome wire and cable including specifications and a technical section, is brought to the reader.

1076—Modular Lighting. A 20-page booklet containing interesting and useful information about the "modular system" of lighting can be obtained by writing to the Mitchell Manufacturing Co., 2525 Clybourn Ave., Chicago 14, Ill.

1082—Lighting Equipment. Just off the press is Catalog No. 50, available from the F. W. Wakefield Brass Co., Vermilion, Ohio. The catalog covers full engineering data on fluorescent equipment in luminous indirect and direct-indirect for both standard and Slimline lamps.

1086—Connectors and Couplings. Tomic Sales and Engineering Co., 4864 Woodward Ave., Detroit 1, Mich., now have available catalog sheets containing data on the complete line of their connectors, couplings, and cable connectors.

1088—Fittings and Fixtures. A 24-page illustrated catalog covering Killark fittings and fixtures is offered by Killark Electric Mfg. Co., Vandeventer and Easton Aves., St. Louis 13, Mo.

1090—Midget-Size Busduct. Complete information on Power Plugin, the new, midget-size busduct, is found in bulletin No. 703, available from Frank Adam Electric Co., 3650 Windsor Pl., St. Louis 13, Mo.

ELECTRICAL SOUTH
806 Peachtree St., NE **December, 1951**
Atlanta 5, Ga.

Gentlemen:

Please send me the bulletins and catalogs indicated.

(Print Plainly)

Name..... **Title**.....

Company.....

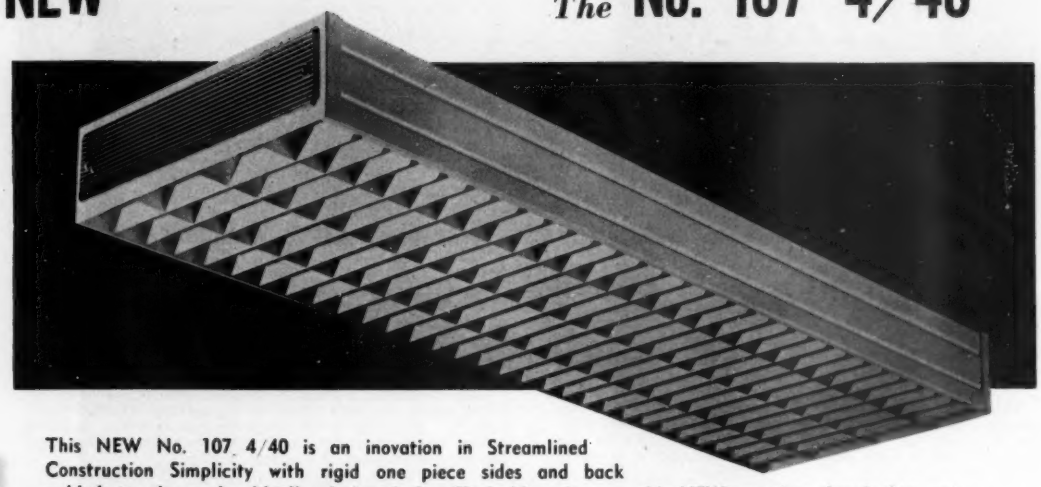
Address.....

City & State.....

Circle numbers below. Bulletins and catalogs will be mailed promptly.

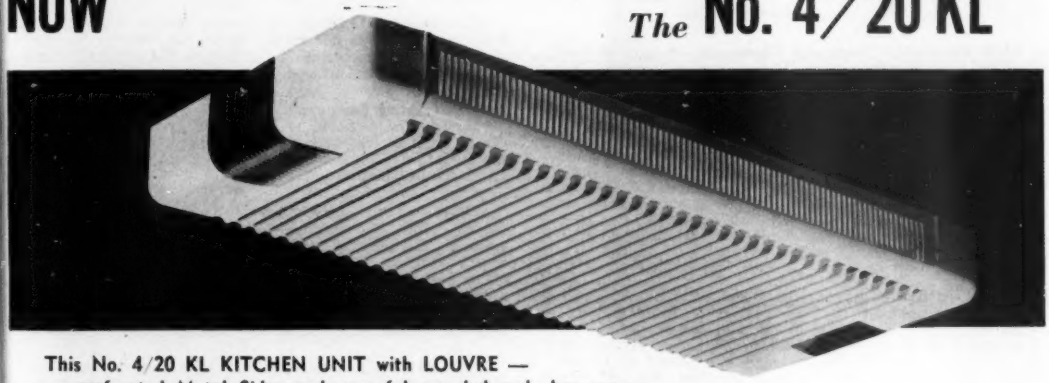
1008	1028	1030	1032	1034
1048	1054	1058	1068	1076
1082	1086	1088	1090	1092
1094	1110	1112	1114	1116
1124	1128	1130	1134	1136
1140	1142	1144	1146	1148
1150	1154	1156	1160	1166
1170	1172	1174	1176	1178
1180				

NEW *The* No. 107 4/40



This NEW No. 107 4/40 is an inovation in Streamlined Construction Simplicity with rigid one piece sides and back welded to the ends. Ideally designed for Flush Mounting, — this NEW creation already has met with popular reception. Size 48 3/16" Long, 4½" Deep, 16" Wide, Weight 45 lbs.

NOW *The* No. 4/20 KL



This No. 4/20 KL KITCHEN UNIT with LOUVRE —
— perforated Metal Sides and graceful rounded ends has won its place for volume sales. Size 27½" Long, 2½" Deep, Weight 16 lbs.

You will find the answer to your DEMANDS for EFFICIENT ATTRACTIVE LIGHTING at COMPETITIVE PRICES in the WM. PENN COMPLETE LINE. FLUORESCENTS, Commercial and Industrial, and a balanced family of SLIMLINES for — Schools, — Stores, — Showrooms, — Offices, — Public Buildings, — Industrial Plants, and other Interiors. All units "BONDERIZED" Rustproof and ETL APPROVED to meet Architects specifications. Let us help you BID on your next Job.

We Extend **The SEASONS GREETINGS** *To All*

Wm. PENN FLUORESCENT LIGHT MFGR.
1429 S. 23rd STREET, PHILA. 24, PENNA.

See our Technical Catalog in the 1952 Sweet's File Architectural ★ Write for NEW Catalog!

1092—Electrical Boxes and Conduit Fittings. Steel City Electric Co., 1207 Columbus Ave., Pittsburgh 12, Pa., offers a catalog of their complete line.

1094—Photoelectric Controls for Street Lighting. A four-page catalog sheet, Bulletin 63300, gives full information on photoelectric controls available from Fisher-Pierce Co., Inc., 59 Ceylon St., Boston 21, Mass.

1110—Flexible Cords and Portable Cables. Bulletin H-420, a 55-page illustrated booklet describing Hazacord cords and cables, is being offered by Hazard Insulated Wire Works, Div. Okonite Co., Wilkes-Barre, Pa.

1112—Shutters and Dampers. Air Conditioning Products Co., 2340 W. Lafayette Blvd., Detroit 16, Mich., has made available an 11-page illustrated catalog No. 44 describing their line of shutters and dampers.

1114—Q L Panelettes. A new 8-page bulletin on Federal Noark QL Panelettes has been announced by Federal Electric Products Co., 50 Paris St., Newark 5, N. J.

1116—Lugs and Connectors. Krueger — Hudepohl, 5 E. 3rd St., Cincinnati 2, Ohio, has made available a fully descriptive catalog, No. 5LC, on solderless terminal lugs and connectors.

1124—Crouse-Hinds Condulets. A newly compiled "Abridged Listing" features over 85% of the complete line of C-H Condulets, plugs, receptacles, industrial lighting fixtures, controls, panelboards, and signalling devices in a 168-page catalog. Quick reference is provided by a detailed contents page and an alphabetical index. The book is designated as Catalog 3100 and is available from Crouse-Hinds Co., Syracuse, N. Y.

1128—Display Lighting. "The New Idea In Display Lighting", a colorful, well-illustrated 12 page catalog has been recently issued by the Amplex Corporation to describe their new Swivelite Accent Lighting Fixtures. The complete line includes canopy hood units, cluster assemblies, portable bases, screw-in hood units and hi-hats. Catalog may be obtained from Amplex Corporation, 111 Water Street, Brooklyn 1, N. Y.

1130—Conduit Fittings. The latest completely illustrative catalogue on their diversified line of conduit fittings is announced by The Atlantic Conduit Fittings Company, 589 Atlantic Avenue, Boston 10, Mass.

1134—Portable Cables For Low Voltage. A well illustrated 24-page catalog. Describes and illustrates the wide variety of single and multi-conductor cables for this voltage. Complete splicing instructions included. Copies may be obtained from Simplex Wire & Cable Co., 79 Sidney Street, Cambridge 39, Mass.

1136—Cavalier Heaters. A booklet is available from Cavalier Corp., Chattanooga, Tenn., describing the special features of the Cavalier Wall Insert Automatic Electric Heaters, and including specifications on the four models of the line. Cutaway views and photos illustrate exclusive features.

1140—Pole Line Hardware. Catalog No. 50 has just been announced by Hubbard and Co. Hundreds of new products in the pole line hardware and accessories line are included in this new edition which is bound in burgundy fabricoid, embossed, and printed in two colors throughout.

1142—Time Switches and Timers. Catalog 1010, describing time switches and timers, available from Sangamo Electric Co., Springfield, Ill. Detailed information is provided about various units, and specifications and illustrations are liberally sprinkled throughout. Information for ordering switches is included at the back of the catalog.

1144—Fluorescent Fixtures. Fluorescent Catalog No. 34 has just been issued by Lithonia Lighting Products Co., Lithonia, Georgia. It contains descriptive material and specifications on a wide range of fluorescent equipment suitable for residential, commercial, industrial and other applications.

1146—Ceil Heat Electric Radiant Heating Cables—New illustrated folders, fully describing Ceil Heat invisible Electric Radiant Heating Cables, have just been issued by the Ceil Heat Division of Homes, Inc., 4204 Kingstone Pike, Knoxville, Tenn. Consumer explanation of radiant ceiling heat as well as technical installation instructions are included in the literature.

1148—Solderless Connectors. Bulletin 750, available from Buchanan Electrical Products Corp., 1290 Central Ave., Hillside, N. J., describes this manufacturer's improved line of Underwriters' listed "pres-SURE-connectors" for solderless splicing and terminating of electrical wires. It contains detailed descriptive data, installation instructions, and ordering information.

1150—Fluorescent Fixtures. Colorful, new 1951 20-page catalog now ready. Front cover shows interesting illustration of "Light through the Ages". Catalog gives complete specifications and pictures of entire Naturlite line manufactured by Light & Power Utilities Corp., 1035 Firestone Blvd., Memphis, Tenn.

1154—Wall and ceiling fans. PERFECT-LINE Manufacturing Corp. is now offering their fan Catalog No. 51. Fans presented include the latest models of PERFECTAIRE industrial and residential wall and ceiling fans. Write to Perfect-Line Manufacturing Corp., Old Country Road and Railroad Avenue, Hicksville, L. I., N. Y. for a copy.

1156—Industrial Lighting. The new Abolite Catalog and Handbook contains a complete descriptive story of all commercial, industrial floodlighting equipment manufactured by the Jones Metal Products, Inc., of West Lafette, Ohio. Several new sections have been added and all major lighting units have revised illustrations, cutaway views, diamentional drawings, plus typical installation diagrams and photos.

1160—Lighting Units. Two new illustrated catalog sheets have been announced by Compco Corp., 2251 St. Paul Ave., Chicago 47, Ill. Bulletin No. 28P8—182 features the Solo indirect diffuser engineered expressly for 50 GA lamps; Bulletin No. 28P8—184 describes Compco universal patttern lighting, which permits unlimited geometric lighting patterns with four basic units.

1166—Electrical Fittings. 40-page illustrated catalog and price list and wide Gedney line. Shown and listed are conduit, threaded entrance, SEC, EMT and ground fittings, and box connectors for both armored and non-metallic cable. Most of the line is made of tough malleable iron, and hot dip galvanized. Desired copies available from Gedney Electric Co., RKO Bldg., Radio City, New York 20, N. Y.

1170—Luminous Ceilings. A 34-page spiral bound book is now available from F. W. Wakefield Brass Co., Vermilion Ohio, containing complete information about luminous ceilings: their conception, principles, development, applications, and suggested room decorations. The book also includes data on illumination, acoustics, and air conditioning.

1172—Bus Duct Manual. A new 68-page manual describing types of bus duct and accessories available, and presenting application and test data, specifications, information on pricing a typical bus duct installation, and a typical bill of materials, is available from Westinghouse Electric Corporation, Box 2099, Pittsburgh, Pa. The manual is designated as Bulletin No B-4272A.

1174—Sports Lighting Fixtures. A complete line of gymnasium and swimming pool fixtures is described in Bulletin S, reseased by Multi Electrical Mfg. Co., 4223-43 W. Lake St., Chicago 24, Ill. Illustrated and described are recessed-type to high-bay units for both types of gym construction, as well as the mercury vapor lamp and incandescent filament-type reflectors.

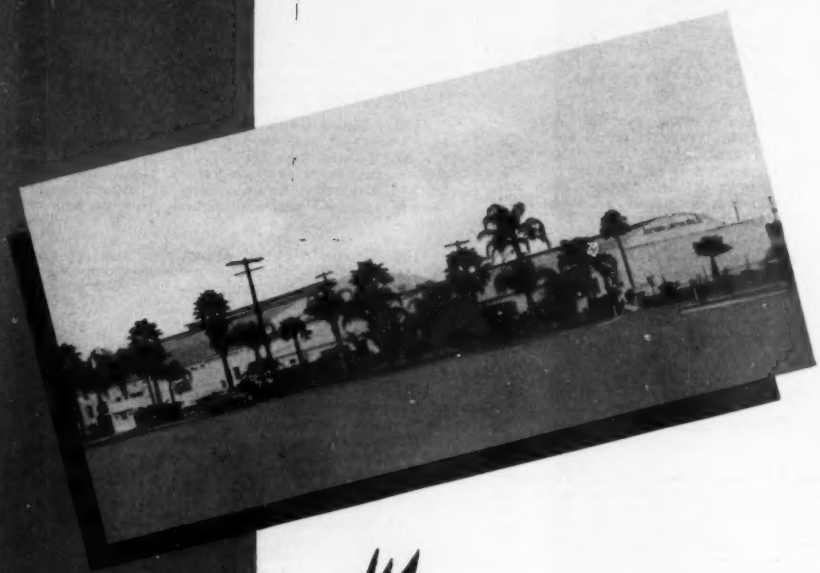
1176—Classroom Lighting. A 4-page, two-color folder on planned classroom lighting has been announced by Light & Power Utilities Corp., 1035 Firestone Blvd., Memphis, Tenn. One of their "Naturlite" fixtures, the Peabody, is illustrated and described. Many good selling points for planned school lighting are included.

1178—Remote-Control Wiring System. Bulletin 16-200 is a 36-page manual describing layout and installation of remote-control wiring, and is available from General Electric Co., Construction Materials Dept., Bridgeport 2, Conn. Advantages and explanation of the system are followed by illustrated installation procedure. System components, circuit diagrams, and a typical home layout round out this completely descriptive manual.

1180—Fluorescent Lighting. 24 page catalog describing complete line of commercial, industrial strip and kitchen lighting units, shielded and open, showing installation and maintenance data and price lists. Available from Louisville Lamp Co., Louisville, Ky.

New home of...

SOUTHERN LIGHTING
MANUFACTURING COMPANY



We are proud to announce that we have moved into our new home. The souths largest factory devoted exclusively to the manufacture of fluorescent lighting fixtures. Our enlarged facilities and additional equipment will permit us to supply you with todays best buys in fluorescent lighting fixtures when and as you want them.

Write now and put your name on the list to receive a supply of our new 1952 catalogs illustrating many new items which will be available shortly.

SOUTHERN LIGHTING MANUFACTURING CO.
ORLANDO FLORIDA

BullDog Plan hailed by contractors!

Established 1908 — Texas 4-2300

W. D. GALE, INC.

Electrical Contractors

7145 Tireman Avenue
DETROIT 4, MICH.

October 29, 1951

BullDog Electric Products Company
P. O. Box 177
Detroit 32, Michigan

Gentlemen:

Well, someone finally did something about it!

Congratulations, gentlemen, for clearing up the safety switch end of the complex electrical-products field. As one of Detroit's oldest contractors we are already feeling the effects of your simplified Vacu-Break line.

For example, to insure installations on time, we have always had the problems of stocking a heavy, complicated inventory of electrical materials, among them many of the 206 safety switches you formerly catalogued. Now that you have reduced that line to only 38 for all applications, ordering is easier, and we have been able to cut our switch inventory drastically.

This, of course, means we can keep our investment down, and save on sorely needed warehouse space, as well.

Furthermore, our customers like your program -- since they receive Type A switches at Type C prices -- improved quality at less cost to them.

Thanks for taking the confusion out of the safety switch line and for initiating a sensible program which should benefit the entire industry.

Very truly yours,

W. D. GALE, INC.

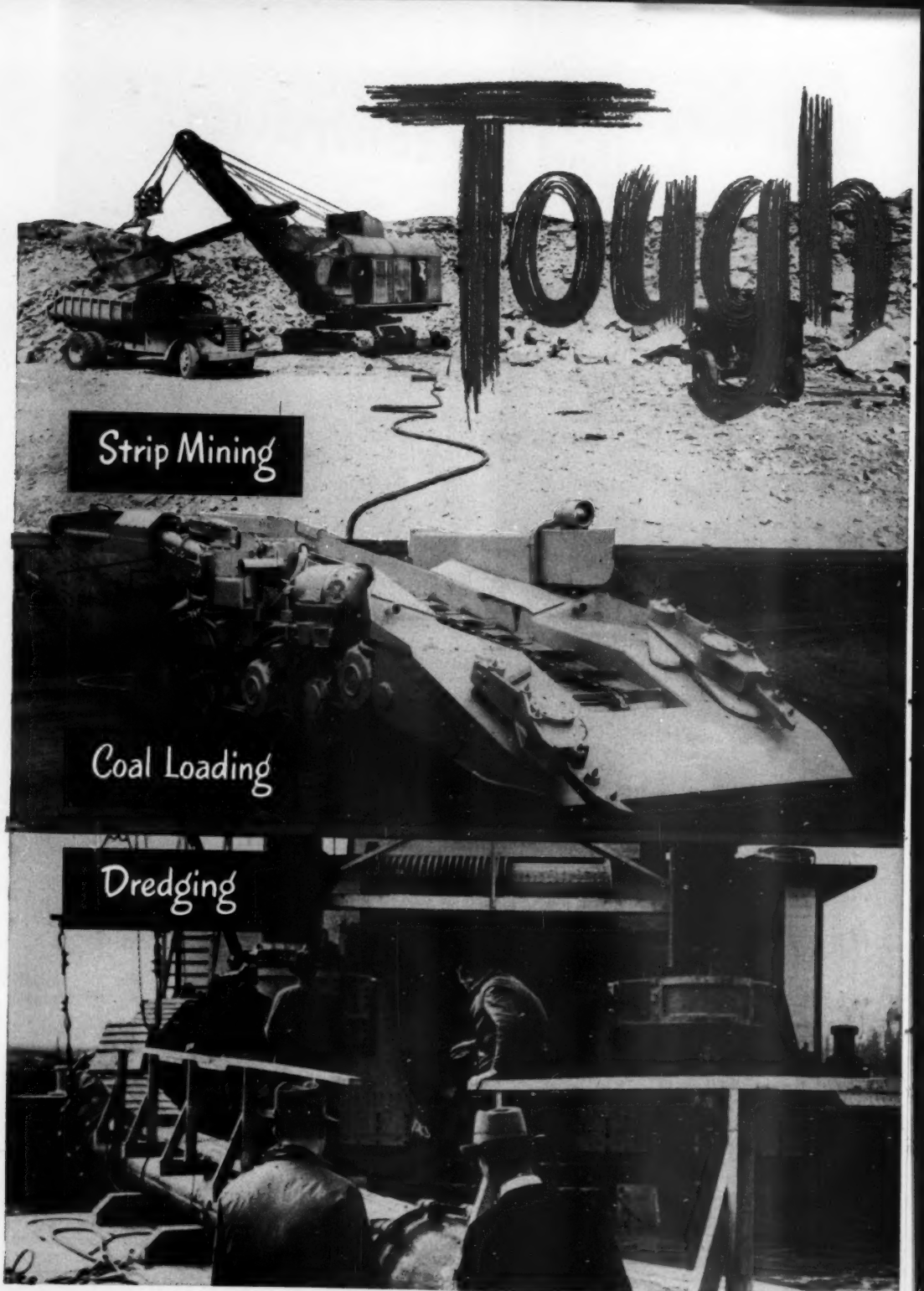
J. A. Schoenith,
President

From everywhere, contractors are writing enthusiastic letters like this, hailing the new BullDog simplification plan . . . reporting faster installations, added convenience, savings in time and money wherever they work with safety switches.

There's every chance that you, too, will get similar benefits if you order, stock and install the simplified line of BullDog Vacu-Break Master Safety Switches. Write Dept. 453-B for descriptive folder.

BULLDOG

BULLDOG ELECTRIC PRODUCTS COMPANY
DETROIT 32, MICHIGAN • FIELD OFFICES IN ALL PRINCIPAL CITIES
IN CANADA: BULLDOG ELECTRIC PRODUCTS OF CANADA, LTD., TORONTO
THE LEADER IN FLEXIBLE ELECTRICAL DISTRIBUTION


Tough
Strip Mining
Coal Loading
Dredging

jobs all...

but they're easy for

AMERCLAD*

***the heavy-duty electrical cable and cord**

You'll find U·S·S Amerclad down in the mines, where it's relentlessly coiled and uncoiled and dragged over rails and ties. You'll find it on railroads for general utility use under all types of conditions.

You'll find Amerclad delivering power to the shovels in quarries and strip mines. There, it's reeled in and out all day long and hauled over sharp rock.

You'll find Amerclad under water, too . . . it's used on dredges that need electrical cable that can withstand great abuse. Actually, there's an Amerclad Cable or Cord for just about any tough operating condition you can name.

Amerclad Cable and Cord is jacketed with tough, resilient Amerprene. This quality jacket resists moisture, sunlight, mineral oil, grease, flame. It will not propagate fire. And it meets the requirements of ASTM D752.

Amerclad Cable and Cord can be furnished with PS Shielding,† the conducting rubber tape that prevents corona discharge because it will not pull away from the insulation like metallic shielding.

For more information, get in touch with your nearest American Steel & Wire Company office.

†*PS Shielding—an original development of American Steel & Wire Company.*

AMERICAN STEEL & WIRE COMPANY, GENERAL OFFICES: CLEVELAND, OHIO
COLUMBIA STEEL COMPANY, SAN FRANCISCO, PACIFIC COAST DISTRIBUTORS
TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM, SOUTHERN DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

American Electrical Wire & Cable

USS

UNITED STATES STEEL

America needs your daily pound of scrap

IF every man, woman and child in America provided one pound of scrap each day, they would supply just about enough to produce the 105 million tons of new steel that the industry hopes to make in 1951.

Like yeast in breadmaking, scrap is essential to steelmaking. Scrap speeds up the process because scrap is already-refined steel. Every ton of scrap used replaces one ton of pig iron. Thus scrap also saves raw materials, because each ton of pig iron represents two tons of iron ore, one ton of coal and half a ton of limestone.

The continuing co-operation of every reader of this page is urgently requested to overcome a scrap shortage daily growing more critical. Turn in--by selling your scrap to regular scrap-gathering channels--any and all broken, worn-out or obsolete things made of iron and steel--machines, tools, pipe, boilers, structural parts and other "junk" you'll probably never use again.

Do your part in the campaign to help meet America's need for more steel. Enlist now for the duration. Remember that the scrap you furnish may help you get more steel.

YOUR SCRAP YOUNGSTOWN IS NEEDED

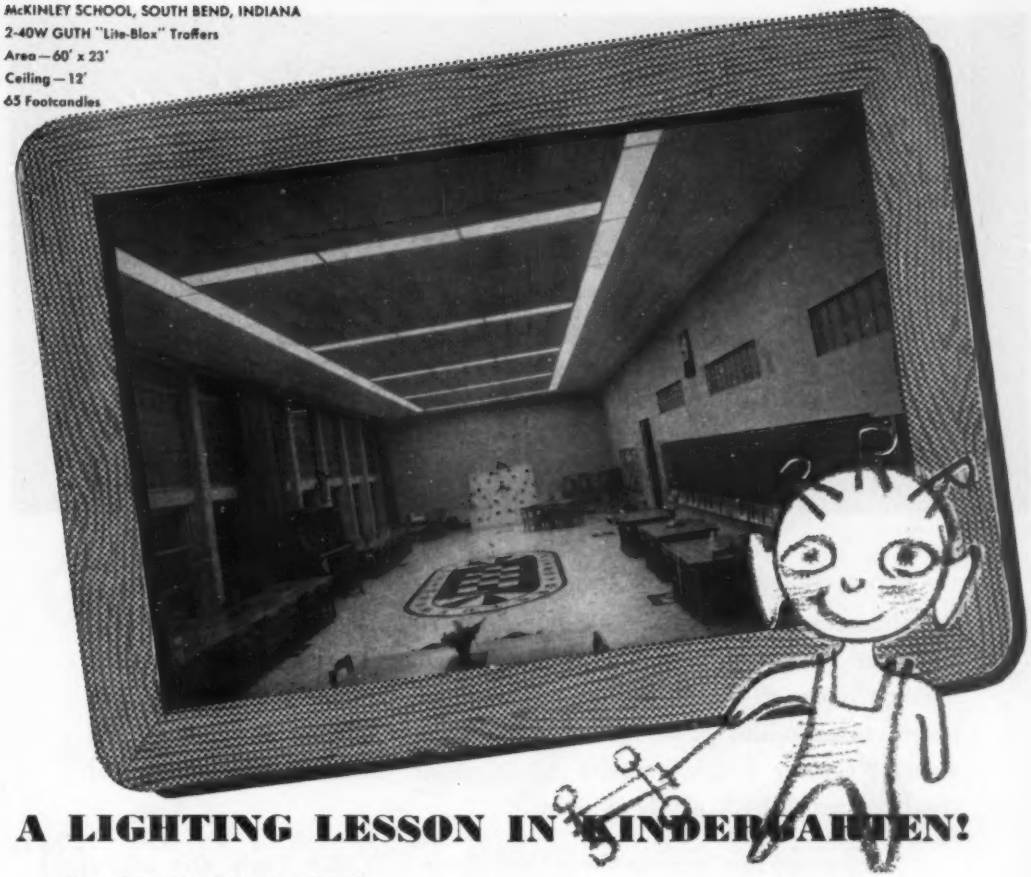
The Youngstown Sheet and Tube Company

General Offices--Youngstown 1, Ohio
Export Offices--500 Fifth Avenue, New York

MANUFACTURERS OF CARBON ALLOY AND YOLOY STEELS

The steel industry is using all its resources to produce more steel, but it needs your help and needs it now. Turn in your scrap, through your regular sources, at the earliest possible moment.

McKINLEY SCHOOL, SOUTH BEND, INDIANA
2-40W GUTH "Lite-Blox" Troffers
Area—60' x 23'
Ceiling—12'
65 Footcandles



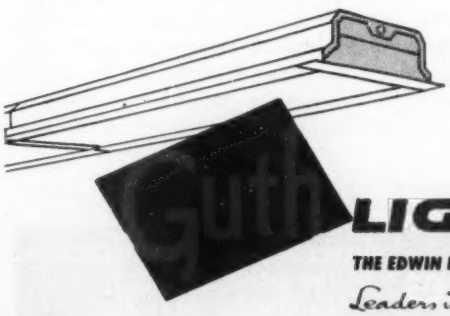
A LIGHTING LESSON IN KINDERGARTEN!

the "3 R's" of Guth
precision-planned school lighting:

Right design
Rugged construction
Reliable performance

In classrooms from kindergarten to college, GUTH fixtures are made to solve the toughest lighting problems. They combine the finest illumination for modern education with important economy in purchase, installation and maintenance.

For more information on GUTH *Precision-Planned* School Lighting, contact your nearest GUTH resident engineer or write for our School Lighting Catalog.



Guth LIGHTING

THE EDWIN F. GUTH COMPANY / ST. LOUIS 3, MISSOURI

Leaders in Lighting Since 1902

865

ONLY TIREX
HAS THE
SELENIUM
NEOPRENE ARMOR

Only Simplex-TIREX cords and cables are jacketed with the famous Selenium Neoprene Armor. This famous cured-in-lead jacket is well known wherever tough, hard jobs are found. Whether it is coal mining, ship building, open pit mining operations, rock quarrying or foundry work the tough, cured-in-lead jacket provides the kind of staying power that you want. Wherever rough, abrasive conditions are found, there you will find the jobs that TIREX excels at doing.

Actual service records show that Simplex-TIREX cords and cables have proved to be the most economical because the Selenium Neoprene Armor lasts so long.

Whenever your requirements call for the use of a portable cord or cable, specify and be sure that you get Simplex-TIREX Cords and Cables.

If it isn't made by Simplex it isn't Tirex

TIREX SELENIUM

Simplex - WIRES & CABLES

SIMPLEX WIRE & CABLE CO.
79 SIDNEY STREET,
CAMBRIDGE 39, MASS.

"No Strangle Holds — No Grunts, No Groans"

No husky bruisers are needed on your crew when you work with Pittsburgh Permaflector Lighting Units. All parts fit together easily, quickly, compactly. Fluorescent Units are wired complete, ready to install; knockouts for lead wires and mounting are clearly marked; inline installations can be aligned perfectly. Incandescent Units are simple to assemble into desired arrangements and combinations for every lighting need. Standard Units are available to fit into fluorescent troffer and luminaire assemblies.

Next time—whistle while you work. Use time and labor-saving Pittsburgh Permaflector Lighting Equipment.

The
MONROE 5000 SERIES

4 & 8 FT. FLUORESCENT LUMINAIRES FOR EFFICIENT LIGHTING

ALL YOU MOUNT IS A BARE CHASSIS

Units are mounted by one man. Hangers provide for vertical, lateral and lengthwise adjustment.

"Pittsburgh" Permaflector

Pittsburgh Reflector Company

405 OLIVER BUILDING · PITTSBURGH 22, PENNSYLVANIA

Manufacturers of Fluorescent and Incandescent Lighting Equipment

DISTRIBUTED BY ELECTRICAL WHOLESALERS EVERYWHERE • PERMAFLECTOR LIGHTING ENGINEERS IN ALL PRINCIPAL CITIES

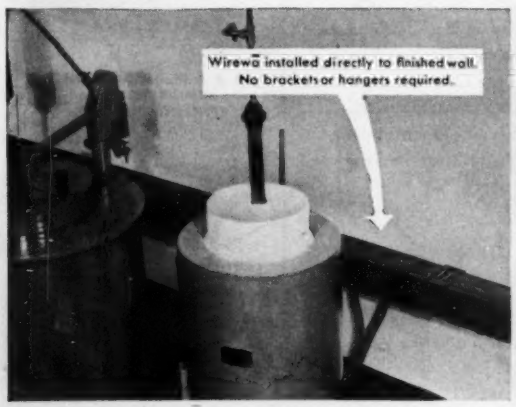
Accurately made hinged couplings speed installation . . . add rigidity to sections for lifting into place . . . serve as hangers.

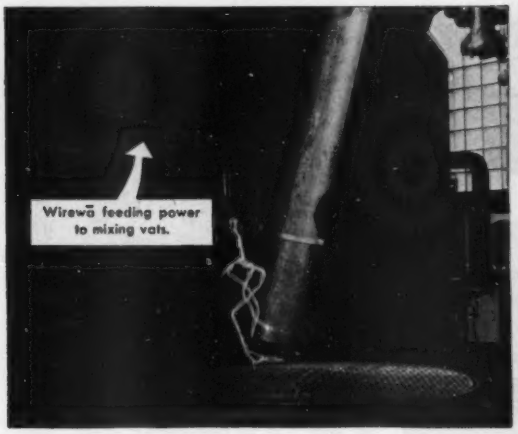
National Electric 4x4 WIREWĀ for Speedy INDUSTRIAL

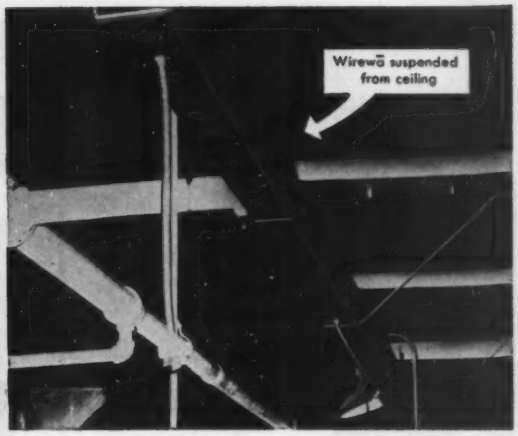
Electricians and plant men like 4 x 4 Wirewā for protecting electrical wiring—for wiring that may be changed, tapped or spliced frequently. NE Wirewā provides *rugged steel protection* plus *accessibility* unequalled by any other type of wiring.

- **Easy to reach for wiring changes**
- **Plenty of room . . . 16 square inches of wireway for wire fills**
- **Multiple KO's for conduit take-offs**
- **Quick, easy to install. Complete line of fittings**
- **Low maintenance**
- **Easy to reroute and extend : . . 100% salvable**

A Wirewā you'll like!

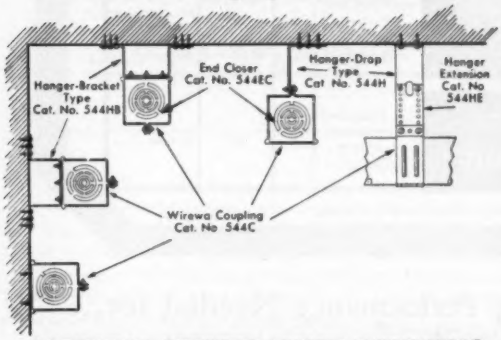






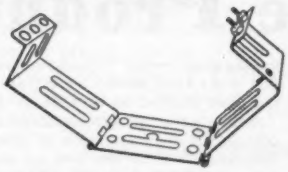
WIRING, EXTENSIONS and RELOCATIONS

Methods of Hanging 4x4 Wirewā


Hanger-Bracket Type Cat. No. 544HB
End Closer Cat. No. 544EC
Hanger-Drop Type Cat. No. 544H
Hanger Extension Cat. No 544HE
Wirewa Coupling Cat. No 544C

COUPLING PERMITS FLUSH MOUNTING

Hinged coupling speeds installation. Simply place around sections to be joined. Tighten two bolts. Three sides flat.



4x4 WIREWĀ FILL TABLE
ALL ONE SIZE WIRE

Wire Size	Area of Rubber Covered Wire—Square Inches		Maximum Number of Wires—All of One Size	
	Types R, and RH	Types T, and TW	Types R, and RH	Types T, and TW
14	.023	.013	139*	246*
12	.027	.017	118*	188*
10	.046	.022	69*	145*
8	.076	.040	42*	80*
6	.123	.081	26	39*
4	.16	.108	20	29
2	.21	.147	15	21
1	.27	.202	11	15
1/0	.31	.236	10	13
2/0	.35	.278	9	11
3/0	.41	.328	7	9
4/0	.48	.390	6	8
250M	.59		5	
300M	.68		4	
400M	.83		3	
500M	.98		3	

No. 14 to 8, solid wire; No. 6 and larger, stranded.
*Maximum number of conductors limited to 30, except as noted in N.E. Code.

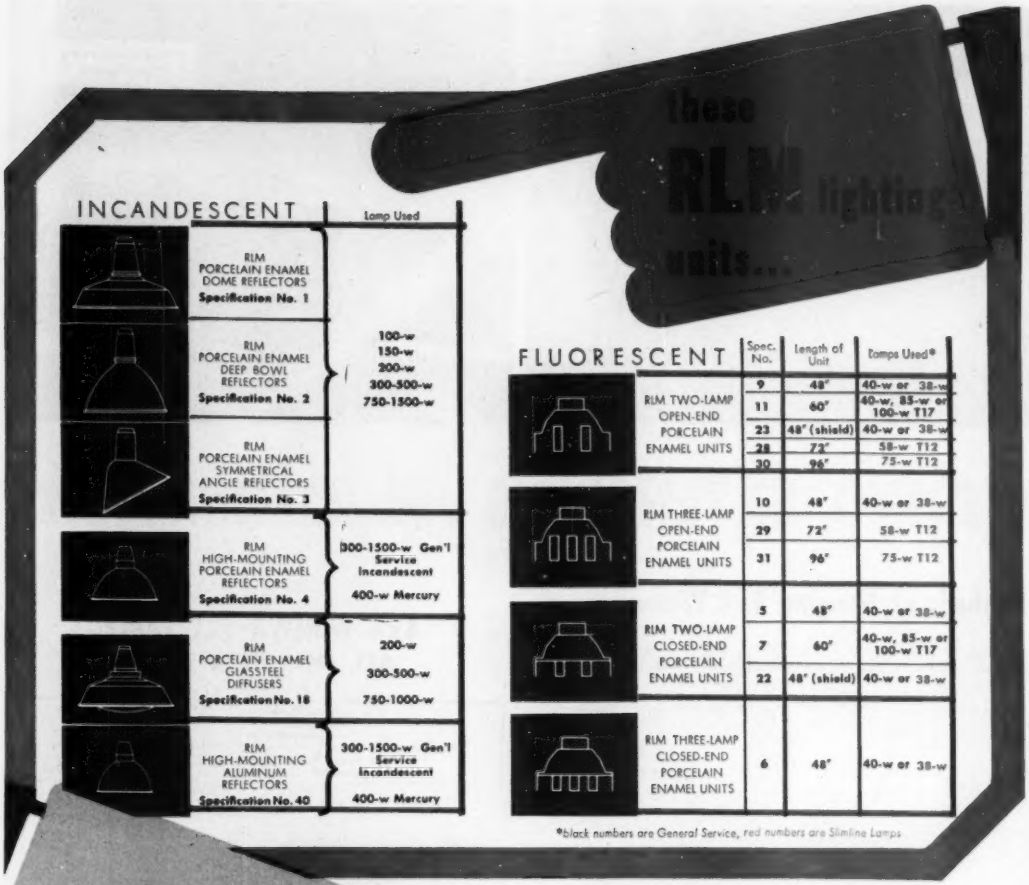
Listed by Underwriters' Laboratories, Inc.

Sold through electrical wholesalers everywhere.

EVERYTHING IN WIRING POINTS TO

National Electric
PRODUCTS CORPORATION

1307 CHAMBER OF COMMERCE BLDG. • PITTSBURGH 19, PA.


these RLM lighting units...
INCANDESCENT
Lamp Used
RLM PORCELAIN ENAMEL DOME REFLECTORS Specification No. 1
RLM PORCELAIN ENAMEL DEEP BOWL REFLECTORS Specification No. 2
RLM PORCELAIN ENAMEL SYMMETRICAL ANGLE REFLECTORS Specification No. 3
100-w 150-w 200-w 300-500-w 750-1500-w
RLM HIGH-MOUNTING PORCELAIN ENAMEL REFLECTORS Specification No. 4
300-1500-w Gen'l Service Incandescent 400-w Mercury
RLM PORCELAIN ENAMEL GLASSTEEL DIFFUSERS Specification No. 18
200-w 300-500-w 750-1000-w
RLM HIGH-MOUNTING ALUMINUM REFLECTORS Specification No. 40
300-1500-w Gen'l Service Incandescent 400-w Mercury
FLUORESCENT
Spec. No.
Length of Unit
Lamps Used*
RLM TWO-LAMP OPEN-END PORCELAIN ENAMEL UNITS
9 48" 40-w or 38-w
11 60" 40-w, 85-w or 100-w T17
23 48" (shield) 40-w or 38-w
28 72" 58-w T12
30 96" 75-w T12
RLM THREE-LAMP OPEN-END PORCELAIN ENAMEL UNITS
10 48" 40-w or 38-w
29 72" 58-w T12
31 96" 75-w T12
RLM TWO-LAMP CLOSED-END PORCELAIN ENAMEL UNITS
5 48" 40-w or 38-w
7 60" 40-w, 85-w or 100-w T17
22 48" (shield) 40-w or 38-w
RLM THREE-LAMP CLOSED-END PORCELAIN ENAMEL UNITS
6 48" 40-w or 38-w
*black numbers are General Service, red numbers are Slimline Lamps

Assure You of the Kind of Lighting Performance Needed for...

Defense Production

Defense production demands the highest type of lighting performance to meet the wide range of seeing tasks, varied atmospheric conditions and difficult seeing conditions found today, as American Industry shifts into high gear. To meet these needs economically and dependably, the emphasis is on *uninterrupted* performance. Therefore it is important to specify units that can be depended upon to provide and *sustain* rated light output over years of service.

Specification of RLM Lighting Units provides finest assurance of efficient and uninterrupted lighting performance. The RLM Label is a warranty of conformance to *minimum standards* established by the Institute for lighting performance that meets most approved modern illuminating practices.

Shown here is a chart, listing the 34 different industrial lighting units for which the RLM Standards Institute has established specifications covering construction, finish, reflector design, ballasts and uniform quality. The Institute is currently engaged in the development of new specifications and revision of present standards in its effort to keep abreast of the latest advancements in illuminating engineering. To make certain of lighting performance that is the kind needed for defense production, specify lighting units certified to conform to RLM Standards of Quality.

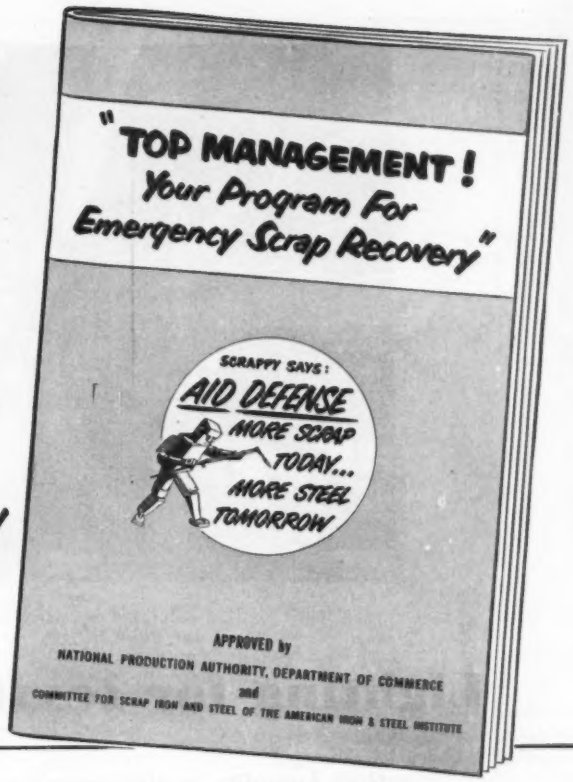
FREE RLM SPECIFICATIONS BOOKLET brings you complete details on the many essentials of Defense Production Lighting. Your copy will be sent free on request to RLM STANDARDS INSTITUTE, Suite 828, 326 W. Madison St., Chicago 6, Ill.

CONFORMANCE to the ESSENTIALS of DEFENSE PRODUCTION LIGHTING is Assured when you specify RLM-LABELED Lighting Units: High diffusion with high reflection factor · Top-quality porcelain-enameled reflectors · Approved reflector design · High power factor ballasts · Uniform quality of materials and construction · Conformance to National Electrical Code

RLM STANDARDS INSTITUTE
INCORPORATED
The letters RLM stand for Reflector and Lighting Equipment Manufacturers

What YOU can do... Must do

to ease the critical iron and steel scrap problem


"TOP MANAGEMENT! Your Program For Emergency Scrap Recovery"
SCRAPPY SAYS:
AID DEFENSE
MORE SCRAP TODAY...
MORE STEEL TOMORROW
APPROVED by
NATIONAL PRODUCTION AUTHORITY, DEPARTMENT OF COMMERCE
and
COMMITTEE FOR SCRAP IRON AND STEEL OF THE AMERICAN IRON & STEEL INSTITUTE

It's a problem calling for the assistance of every thoughtful business man—now.

Unless the steel mills get more scrap . . . furnaces may have to be shut down.

Shut down—at a time when our armed forces need more and more equipment . . . when civilian demands for steel are greater than ever . . . when our economy is fighting desperately against inflation!

You Can Help. Yes . . . regardless of the business you're in . . . you're in the scrap business, too.

If you're in the steel-fabricating business, you have extra *dormant* scrap to be added to your *production* scrap.

If you're in any other business, you surely have idle metal that will do you—and America—more good being fed into furnaces than cluttering up your premises.

Write for Suggestions. The booklet shown here tells how to set up a Scrap Salvage Program with least amount of effort and minimum interference with your regular operation. It tells where to look for scrap, what to do with it when you get it.

You are urged to send for the booklet now. Use the coupon.

FACTS ABOUT SCRAP SALVAGE

Steel production	1950 — 97,800,000 net tons
Estimated capacity	1952 — 119,500,000 net tons
Purchased scrap used*	1950 — 29,500,000 gross tons
Estimated purchased scrap requirement*	1952 — 36,200,000 gross tons

*All consumers

Where will the extra tonnage come from? Mostly from your *dormant* metal—obsolete machines and structures, tools, jigs, fixtures, gears, wheels, chains, track.

NON FERROUS METAL NEEDED, TOO:

A PUBLIC SERVICE PROJECT — THE ADVERTISING COUNCIL

This advertisement is a contribution, in the national interest, by

ELECTRICAL SOUTH

Advertising Council
25 W. 45th St.
New York 19, N. Y.

Please send me a copy of the free booklet: "Top Management: Your Program for Emergency Scrap Recovery".

NAME.....

COMPANY.....TITLE.....

ADDRESS.....

CITY.....ZONE.....STATE.....

Lighting for textile mills

High humidity conditions and numerous ceiling obstructions pose special problems for the lighting engineer

♦ AN OUTSTANDING EXAMPLE of industrial progress in the South is to be found in the Judson Textile Mills, in Greenville, S. C. Many unusual problems are encountered in the modernization of textile mill lighting, and the experience in the relighting of these mills should be helpful to others engaging in industrial lighting modernization.

The lighting for the weave room of the Judson Mills, which is a nylon and rayon plant, was planned by Robert McClellan, field representative of Sylvania Electric Products Inc., in co-operation with W. T. Watson, plant engineer for Judson Mills, who personally supervised the entire project.

The lighting in the Judson Mills weave room is a continuous-row-type installation. The fixtures used are an industrial type having weatherized top housing and porcelain reflectors. This particular type has been found to hold up well under the adverse high-humidity conditions prevalent in textile mills, where steam jets are used to maintain humidity.

Among the problems encountered were the removal of all old wiring and conduit as well as the removal of old lighting units. The installation of the new fluorescent fixtures required careful consideration to co-ordinate the installation with the main air-conditioning ducts, humidifiers, and the return water lines for the air conditioning, which are graded in order to provide gravity flow. Also, it was necessary that the new lighting system be installed without interruption of production. This was accomplished by the erection of special scaffolding having a 50-foot span which covered three looms at a time.

Difficult problems solved

The new lighting in the Judson Mills weave room has solved some difficult problems and increased efficiency. With the old lighting installation, it was necessary to have inspectors move about the weave room with drop-cord portable inspection lights.

This is no longer necessary under the new system. As a matter of fact, it is reported that the loom operators themselves are frequestly able to detect flaws.

Without considering the reduction in defective material, Mr. Watson estimates that a saving of $1,500 per year has been made on the materials involved in the inspection operation. These ma-

These views of the Judson Mill weave room, of Greenville, S. C., show lengthwise and crosswise views of the continuous rows of 8-foot and 4-foot slimline fluorescent fixtures which provide 54 foot-candles of general area lighting. Industrial type fixtures having weatherized tops and porcelain reflectors were chosen for this installation because of the high humidity conditions prevailing in such areas. (All photos used through courtesy of Sylvania Electric Products, Inc.)

terials include drop-cord lamps, the shop cost of making them up, and so on.

It does not include the additional time previously required by the inspector to make an inspection. Mr. Watson further estimates that as a result of the savings in production costs and time, the new installation will pay for itself, including both the cost of the fixture and the cost of installation, in three years.

The weave room in which this new lighting installation was installed is approximately 300 feet by 400 feet, with a structural ceiling height varying from 17 feet to 21 feet.

Previously, the weave room was lighted with 1600 mercury vapor and RF units, providing a lighting level of approximately 17 foot-candles over the general area.

The new installation consists of 8-foot and 4-foot industrial slimline fixtures with weatherized top housing and porcelain reflectors. All are two-lamp units.

The continuous runs of fixtures are mounted at a height of 13 feet 6 inches above the floor, and the rows are spaced on approximately 7½-foot centers.

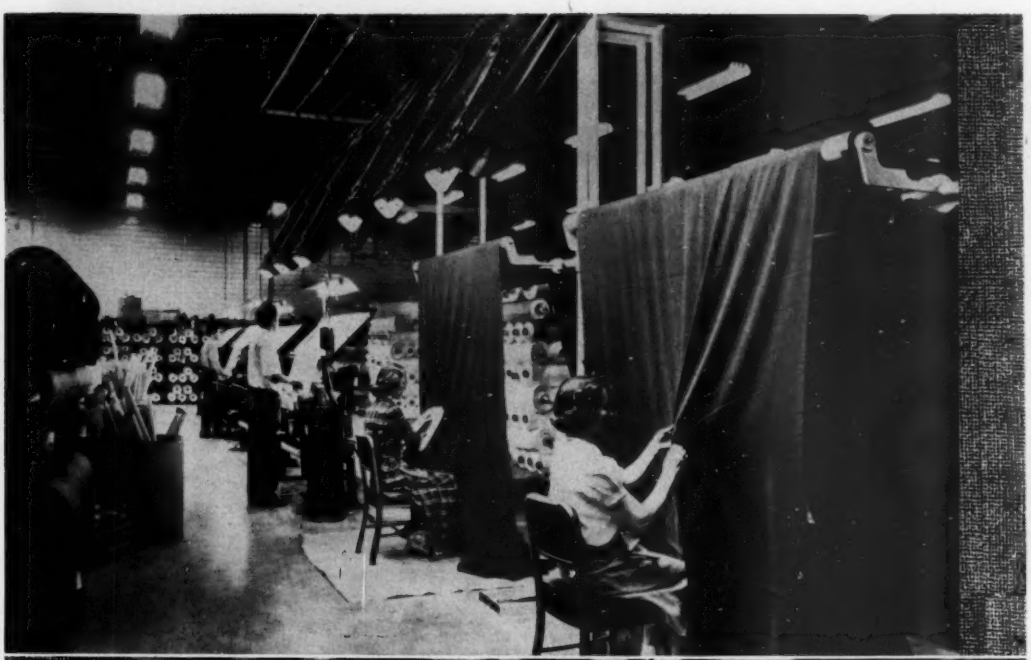
The 4-foot fixtures were installed at points where the rows pass under air-conditioning ducts. These are mounted at a height of 12 feet above the floor.

Throughout the Judson Mill weave room, cool white fluorescent lamps were installed. Experience with the cool white fluorescent tubes in this mill has been very satisfactory, and Mr. McClellan observes that there is a general trend in southern textile mills toward the use of cool white rather than the daylight fluorescent tubes which have been so steadfastly employed in past years.

The principal benefit reported for the use of cool white lamps is the increased level of illumination which they make possible in existing installations, and the saving in equipment in new installations because of their higher lumen output. In the case of the 40-watt tube, for example, the daylight tubes produces approximately 2000 lumens while the new cool white tube produces 2200 lumens. In addition, the cool white lamp, having less blue component, is reported to be a more pleasant color to the eye. The installation in the Judson Mill weave room provides a lighting level for the general area of about 56 ft-c, maintained.

The weave room humidity, of course, is purposely kept very high. Since high humidity tends to adversely affect the operation of instant-starting lamps, there has been some question as to how satisfactory slimline lamp operation would be under such conditions. After more than six months of operation, the lamps are said to have the complete satisfaction of the customer.

Photographs of other outstanding textile mill lighting installations, completed recently for mills located in the South, are shown on the two following pages.



Shown here are the modern lighting installations completed recently for cloth inspection in southern textile mills. The upper picture is the cloth inspection area of the Excelsior Finishing Plant, Deering-Milliken Co., Pendleton, S. C. The ceiling fixtures provide general illumination of 30 foot-candles. In addition, a group of industrial-type fluorescent fixtures are suspended from the ceiling at an angle which furnishes light directly on the cloth being inspected. The lower picture shows the inspection department of the Gerrish-Milliken Mill, Pendleton, S. C. A special feature of this installation is the design of the cubicle having luminous panels on two sides. The cloth passes between the inspector and the luminous panel, resulting in a very efficient inspection procedure.

Two other outstanding textile lighting installations are shown here. The upper photograph shows the tricot department and slasher room of the Gerrish-Milliken Mill, Pendleton, S. C. The general lighting level is maintained at 45 foot-candles. Two-lamp industrial type units are used in continuous rows with some additional fixtures in between running crosswise where additional illumination is required. The picture below shows the rayon weave room of the same mill. Two-lamp industrial type fixtures in continuous rows provide an illumination level of 40 foot-candles in this room. The installations in the Gerrish-Milliken Mill were made by Webb Electric, of Anderson, S. C. Lighting in the Deering-Milliken mill, shown opposite, was made by J. Frank Blakeley Co., Spartanburg.

Ceiling prices for contractors

A new ceiling price regulation tailored to fit the construction industry has been issued. Most contractors will be affected

♦ A NEW CEILING PRICE regulation designed to meet the specific needs of the construction industry has been issued by the Office of Price Stabilization. Designated as CPR 93, the new regulation became effective November 20, 1951.

The new regulation covers building construction, in addition to some other types of construction, and therefore will apply to electrical contractors and other building trades engaged in modification, alteration, additions, and repairs, as well as new construction, involving plumbing, heating, air conditioning, electrical equipment, and so on.

Previously, construction and related services and sales of installed material were covered generally by the General Ceiling Price Regulation until the issuance of Ceiling Price Regulation 34 (services) on May 16, 1951. Pricing under these regulations proved difficult and unsuited to the construction industry. This led to the issuance of CPR 93, a regulation tailored specifically for construction and related services and sales of installed materials.

In general, the new regulation establishes ceiling prices on the basis of current costs for labor, materials, and equipment, plus 9/10 of the highest mark-up for profit which the seller had in effect for a similar job during the base period July 1, 1949, to June 24, 1950.

In reducing the base period percentage mark-up for profit by 10 per cent, as provided in the new regulation, OPS officials pointed out that costs of construction labor and building materials have risen by 10 per cent and 12 per cent respectively, since the outbreak of hostilities in Korea. It is estimated therefore that 9/10 of the pre-Korean percentage mark-up for profit, when applied to increased costs, will result in approximately the same dollars and cents profits as the seller realized during the base period on a similar job.

The base period percentage mark-up for overhead, however, need not be reduced if the seller can make a separation of his total base period percentage mark-up into an applicable percentage representing profit and an applicable percentage representing his recovery of overhead expense.

All construction covered

CPR 93 covers prime contractors, sub-contractors, or any person who makes the kind of sale or supplies the kind of service covered by this regulation. (The "one-man shop" is exempt. If

MARKUPS OR FEES FOR SALES UNDER LUMP-SUM AND COST-PLUS CONTRACTS (Section 31)

BASE PERIOD CONTRACT USED FOR COMPARISON							BASE PERIOD PERCENTAGE MARKUP OR FEES		CPR 93		BASE PERIOD FIXED DOLLAR FEE
CONTRACT NO. AND DATE	CONTRACT WITH	CONTRACT PRICE	TYPE OF SERVICE	APPLIES TO CONTRACTS IN SIZE FROM	APPLIES TO CONTRACTS IN SIZE TO	COST BASE	% FOR PROFIT	& FOR OVERHEAD	PROFIT MARKUP	TOTAL MARKUP OR FEE	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(m)
(Example of lump-sum and cost-plus fixed percentage fee contracts)							%	%	%	%	$
9999 July 30, 1949	Blank Investment Co.	$40,569.42	House Construction (lump-sum)	$30,000	$50,000	Labor, Materials, Equipment Rent, Equipment operation, Grading Subcontracted	10	15	9	24	
(Example of cost-plus fixed dollar fee contract)											
9999 March 1, 1950	Blank Investment Co.	$12,000	Bldg. Repairs	$10,000	$30,000						$2,000

For lump-sum—fill out Columns (a) thru (f)
For cost-plus fixed percentage fee—fill out Columns (a) thru (k)
For cost-plus fixed dollar fee—fill out Columns (a) thru (f) and Column (m).

Fig. 1. This is the type of form suggested by OPS as a means of complying with the portion of CPR 93 that requires that a summary be kept by the contractor of all contracts handled on a lump-sum or cost-plus basis. This summary is required in addition to the keeping of all supporting records.

you do not employ any helpers but work alone to supply construction services such as painting, plumbing, paper-hanging, electrical wiring, and so forth, you are not covered by this regulation.)

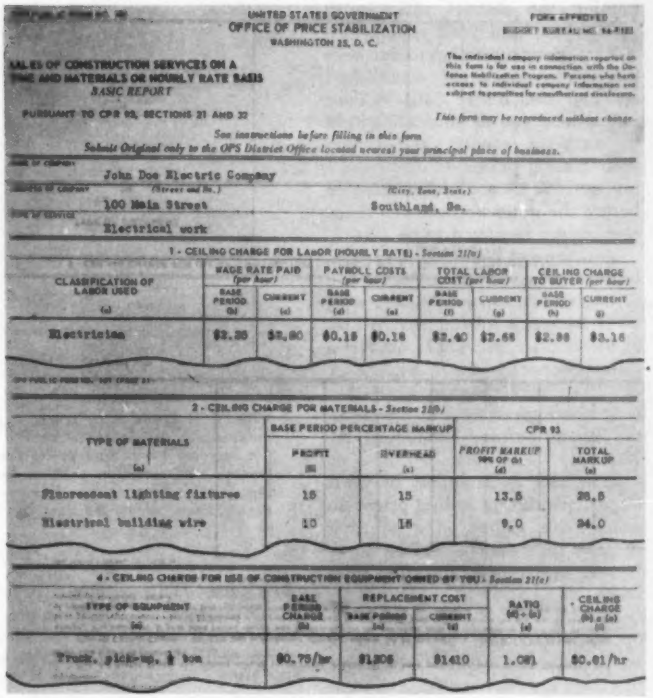
The transactions covered by CPR 93 include those in which the seller furnished labor, or any combination of labor, materials, and services for building, highway, heavy, railroad, and miscellaneous construction. This includes the installation or incorporation of materials or equipment into a building; the removal of materials or equipment from a project; the repair, remodeling, or alteration of an existing building, structure, or construction project; or the installation and repair of production and processing facilities whether or not connected with building construction.

Transactions not covered

The regulation does not cover certain transactions such as the field erection or installation of equipment or machinery covered ordinarily by CPR 30. Neither does it cover the repair and maintenance of electrical appliances, nor the separate installed sale of appliances such as domestic refrigerators, washing and ironing machines, space heaters, water coolers, portable air conditioners, cooking ranges and stoves, when the cost of installation is incidental. Certain other transactions are not covered such as contracts to maintain domestic oil burners or comparable equipment over a stipulated period of time, installed sales of standard floor coverings such as linoleum, etc.

The base period to be used in calculating ceiling prices under CPR 93 is the period July 1, 1949, through June 24, 1950. The base period was purposely made approximately one year in order that it would include all seasons of the year and thus provide a suitable base period for certain operations that may be of a seasonal nature.

Two terms used in connection with this regulation are "base period mark-up" and "base period price." The base period mark-up is the highest base period percentage mark-up for profit, overhead, or for profit and overhead over a cost base for any type of job or installation which you performed or upon which you made a bid during the base period. The base period price is the highest price you had in effect to each class of buyer during your base period for each type of construction service.



UNITED STATES GOVERNMENT
OFFICE OF PRICE STABILIZATION
WASHINGTON 25, D. C.

FORM APPROVED

SALES OF CONSTRUCTION SERVICES ON A TIME AND MATERIALS OR HOURLY RATE BASIS
BASIC REPORT
PURSUANT TO CPR 93, SECTIONS 21 AND 22

The individual company information reported on this form is for use in connection with the Defense Stabilization Program. Persons who have access to individual company information are subject to penalties for unauthorized disclosure.

This form may be reproduced without change

See instructions before filling in this form
Submit Original only to the OPS District Office located nearest your principal place of business.

NAME OF COMPANY: John Doe Electric Company
ADDRESS OF COMPANY (Street and No.): 100 Main Street (City, Zone, State): Southland, Ga.
TYPE OF SERVICE: Electrical work

1 - CEILING CHARGE FOR LABOR (HOURLY RATE) - *Section 21(a)*

CLASSIFICATION OF LABOR USED (a)	WAGE RATE PAID (per hour) BASE PERIOD (b)	WAGE RATE PAID (per hour) CURRENT (c)	PAYROLL COSTS (per hour) BASE PERIOD (d)	PAYROLL COSTS (per hour) CURRENT (e)	TOTAL LABOR COST (per hour) BASE PERIOD (f)	TOTAL LABOR COST (per hour) CURRENT (g)	CEILING CHARGE TO BUYER (per hour) BASE PERIOD (h)	CEILING CHARGE TO BUYER (per hour) CURRENT (i)
Electrician	$2.25	$2.80	$0.15	$0.16	$2.40	$2.66	$2.88	$3.16

2 - CEILING CHARGE FOR MATERIALS - *Section 22(b)*

TYPE OF MATERIALS (a)	BASE PERIOD PERCENTAGE MARK-UP PROFIT (b)	BASE PERIOD PERCENTAGE MARK-UP OVERHEAD (c)	CPR 93 PROFIT MARK-UP 99% OF (b) (d)	CPR 93 TOTAL MARK-UP (e)
Fluorescent lighting fixtures	15	15	13.5	28.5
Electrical building wire	10	15	9.0	34.0

4 - CEILING CHARGE FOR USE OF CONSTRUCTION EQUIPMENT OWNED BY YOU - *Section 21(c)*

TYPE OF EQUIPMENT (a)	BASE PERIOD CHARGE (b)	REPLACEMENT COST BASE PERIOD (c)	REPLACEMENT COST CURRENT (d)	RATIO (d) ÷ (c) (e)	CEILING CHARGE (b) x (e) (f)
Truck, pick-up, ½ ton	$0.75/hr	$1206	$1410	1.081	$0.81/hr

Fig. 2. Reports must be filed with OPS showing your ceiling price calculations if you make sales under a time and materials, hourly rate basis. OPS provides the forms. No. 101 is used for the initial report. Portions of it, filled in, are shown here. (A somewhat similar form is required by OPS from all contractors making sales of equipment on installed sales basis. It is designated as No. 102.)

CPR 34 can be used

While CPR 93 will supersede CPR 34 in so far as most construction services are concerned, there may be instances where an electrical contractor will prefer to sell or continue to sell a construction service at the ceiling price established and reported under CPR 34. This is permissible. However, if you choose to use a percentage mark-up established under CPR 34, you may not apply this mark-up to correct costs. It must be applied to costs prevailing during the CPR 34 base period, that is, December 19, 1950, through January 25, 1951, unless otherwise provided in CPR 34.

If you should choose to sell a construction service at the ceiling price established and reported under CPR 34, this does not affect your right at any time later on to put into effect the ceiling prices as computed or recomputed under CPR 93.

Reports are required

If you make a sale after the effective date of CPR 93, that is, November 20, 1951, at the ceiling price established and properly reported under CPR 34, you must file with your OPS office a statement setting forth the price you are charging and state that you have priced it under CPR 34,

naming the district office with which you filed your report.

Also, your operation under ceiling prices previously established and reported under CPR 34 does not relieve you of your obligation to compute, record, and report your ceiling prices and mark-ups under CPR 93 and file these on or before the dates upon which these reports are required to be filed.

You are not required, however, to recalculate under CPR 93 the ceiling prices you established with CPR 34 for a job in progress as of November 20, 1951, or for a job commenced before November 20, 1951, according to a written contract entered into, or a written bid made before, November 20, 1951.

Provision is included in CPR 93 for calculating ceiling prices on sales made either on a contract basis, a time and materials, hourly rate basis, or an installed sales basis.

Pricing methods for sales made on contract basis vary according to the type of contract. The order includes instructions for calculating ceiling prices under lump-sum contracts, cost-plus fixed percentage fee contracts, cost-plus fixed dollar fee contracts, and cost-plus contracts with guaranteed limits.

The lump-sum contract

In the case of a lump-sum contract, where the selling price includes all your costs, overhead, and a profit, the ceiling price is determined as follows:

(1) Find the highest percentage mark-up for overhead and profit which you had in effect on a comparable job during the base period.

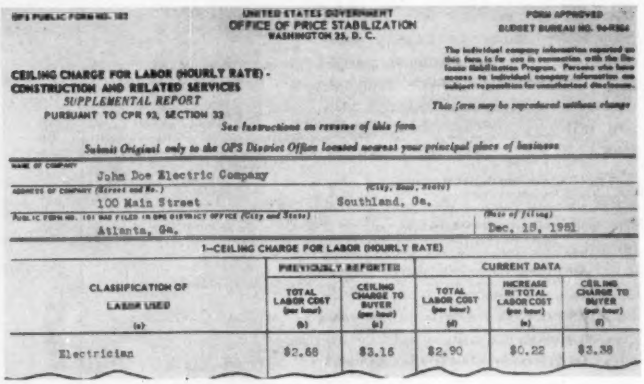
(2) Separate this percentage mark-up into two parts, one representing profit and the other your overhead expenses. (For example, if your base period mark-up was 20 per cent, 15 per cent may have represented your overhead expenses and 5 per cent your profits.)

(3) Diminish your profit mark-up by 10 per cent. (If your profit mark-up was 5 per cent, you must now use a mark-up of 10 per cent less or 4.5 per cent.)

(4) Add your overhead mark-up to your diminished profit mark-up. This is your revised total mark-up. (For example, in the case of the figures used above, your revised total mark-up would be 4.5 per cent plus 15 per cent, or 19.5 per cent.)

(5) Multiply the total estimated current costs of the elements of the same cost base used in your comparable base period contract by your revised total mark-up. This is your estimated overhead expenses plus your profit.

(6) Add this amount to your estimate of the total current costs (exclusive of overhead expenses) of the work to be done under this contract. This is your ceiling price for the lump-sum contract sale.



OPS PUBLIC FORM NO. 102 — UNITED STATES GOVERNMENT — OFFICE OF PRICE STABILIZATION — WASHINGTON 25, D. C. — FORM APPROVED — BUDGET BUREAU NO. 94-R304

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CEILING CHARGE FOR LABOR (HOURLY RATE) - CONSTRUCTION AND RELATED SERVICES

SUPPLEMENTAL REPORT

PURSUANT TO CPR 93, SECTION 32

See instructions on reverse of this form

Submit Original only to the OPS District Office located nearest your principal place of business

NAME OF COMPANY: John Doe Electric Company

ADDRESS OF COMPANY (Street and No.): 100 Main Street (City, State): Southland, Ga.

PUBLIC FORM NO. 101 WAS FILED IN OPS DISTRICT OFFICE (City and State): Atlanta, Ga. (Date of filing): Dec. 18, 1951

I—CEILING CHARGE FOR LABOR (HOURLY RATE)

CLASSIFICATION OF LABOR USED (a)	PREVIOUSLY REPORTED: TOTAL LABOR COST (per hour) (b)	PREVIOUSLY REPORTED: CEILING CHARGE TO BUYER (per hour) (c)	CURRENT DATA: TOTAL LABOR COST (per hour) (d)	CURRENT DATA: INCREASE IN TOTAL LABOR COST (per hour) (e)	CURRENT DATA: CEILING CHARGE TO BUYER (per hour) (f)
Electrician	$2.68	$3.16	$2.90	$0.22	$3.38

Fig. 3 If labor rates increase after Form No. 101 is filed, the contractor may file a supplemental report on Form 102, shown here. This enables him to increase his ceiling prices for labor by the amount of the increased labor costs. (A somewhat similar supplemental form, No. 104, is available to enable the contractor to increase ceiling prices on sales made on an installed sales basis when the cost of the item to the contractor has increased.)

Cost-plus percentage fee

In the case of a cost-plus fixed percentage fee contract sale, where the fixed percentage fee over cost is to cover your overhead and profit, you figure your ceiling price as follows:

(1) Find the highest base period percentage which you used as a fee in a comparable contract during the base period.

(2) Separate this base period percentage into two percentage items representing overhead and profit. (For example, if your percentage fee was 20 per cent, 15 per cent might be overhead and 5 per cent profit. This should be determined from your records and not simply by guess or estimate.)

(3) Diminish your profit percentage by 10 per cent. (For example, if 5 per cent is your profit percentage, you must now revise this downward by 10 per cent which would make it 4.5 per cent.)

(4) Add your overhead percentage fee as found in (2) above to your diminished profit percentage as calculated in (3). (In the example given this would be 15 per cent plus 4.5 per cent, or a total of 19.5 per cent.) This is your ceiling percentage fee which may be applied to current costs of all the elements of the contract accepted on a cost-plus fixed percentage fee basis.

Cost-plus dollar fee

In connection with contract sales on a cost-plus fixed dollar fee basis, your attention is directed to the fact that it is not necessary to revise the base period dollar fee downward as was necessary in the lump-sum and percentage fee type of contract.

To determine the ceiling price for a contract on the cost-plus fixed dollar fee basis, you simply find the dollar amount which you used during the base period as a fee in a comparable contract in

(Continued on page 64)

Lamp and lighting display

builds business in all departments

Versatile retail showroom creates house wiring and remodeling sales for Texas contractor

by Robert A. Latimer

♦ MANY ELECTRICAL contractors believe that operating a retail showroom for lamps, lighting fixtures, and appliances is "too much grief." They may be passing up a valuable merchandising asset, according to Hugh A. Thompson, head of Thompson Electric Company, electrical contractors, 650 Main St., Beaumont, Texas.

In his more than 42 years of electrical contracting experience, Mr. Thompson has seen a lot of electrical contractors come and go on the Beaumont scene. He reminisces that those firms which weathered depressions and grew in volume were usually those which had direct contact with the average homeowner.

"It doesn't matter," Mr. Thompson points out, "whether the firm specializes entirely in huge industrial contracts or whether it is actively engaged in the house wiring and remodeling field. In either instance, maintaining a retail showroom, which familiarizes the average homeowner with the company and its work, provides valuable groundwork for every type of electrical contracting work.

Thompson Electric has a 60- by 80-foot ground-floor showroom which they use entirely for lighting fixtures, lamps, appliances, package air conditioning, electrical replacement parts, and a homeowner's service counter.

A retail showroom gives the electrical contractor an opportunity to demonstrate many of his wares.

For example, the entire Thompson building is comfortably air-conditioned with a 15-ton system, typical of those which the firm installs in large homes and retail stores.

The lighting system, which is composed of fixtures the firm handles, can be varied from 20 or 30 foot-candles up to 60 or more through every inch of the showroom space.

An electrically operated treadle doorway swings open the door of the building as the customer approaches.

Many of the conveniences which Thompson Electric offers in its installations are in everyday use at the showroom: mercury switches, electrical timing

(Continued on page 63)

Thompson Electric, Beaumont, Texas, has a 60- by 80-foot ground-floor showroom. Half of that space is allotted to display of 50 lighting fixtures, each of which can be individually removed and replaced.

APPLICATION

Installation hints and practices for steel electrical raceways

Part 2

A safe, trouble-free steel raceway installation results when attention is given to the many minor details

♦ THE FIRST ARTICLE of this series emphasized the need for proper tools and an understanding of their use in order to install steel electrical raceways at the lowest cost and in a workmanlike manner. This article continues with a discussion of the many small points that must be observed in order to turn out a trouble-free, long-lasting installation.

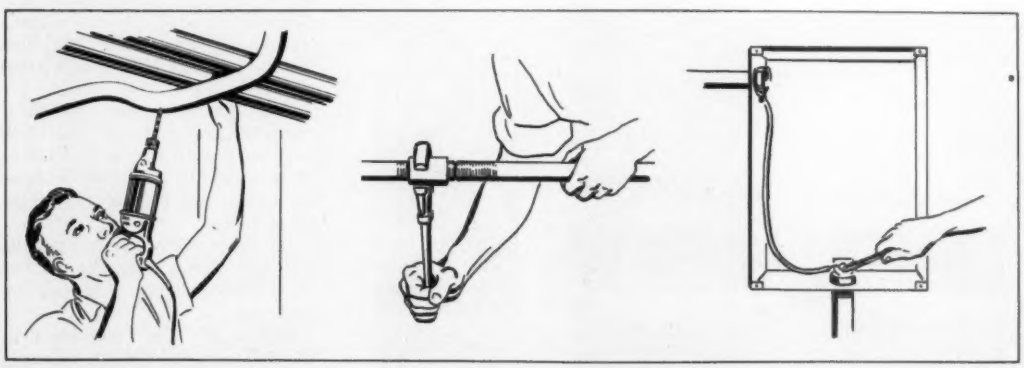
Information for this series of articles was furnished by the Committee on Electrical Distribution Systems of the American Iron and Steel Institute.

In spite of all precautions that the manufacturer takes by shipping conduit with couplings and thread protectors attached, threads may become dirty or slightly deformed during shipment or rough handling prior to installation. Enameled conduit may have some slight residue of the enamel sticking to the threads.

Many top-notch electricians make a standard practice of recutting all factory-cut threads on conduit before installation. While this is not always necessary on galvanized conduit, it will always save time in the long run on enameled conduit.

Clean, sharply cut threads make a better continuous ground and save much grief and unnecessary labor. It takes but little time to run a die over the threads before installing the conduit. A little time spent in the beginning of a job may save much time later on.

Factory-cut threads are cut so



Low points in conduit systems may require drains. Suitable drain-type fittings may be used or small holes may be drilled at low points.

Running threads are forbidden by the Code. Electricians are tempted to use them sometimes in tight spots. Use a union or threadless coupling.

Electrical continuity is a most important feature of steel raceway system. Assure good grounds at boxes by installing bonding jumpers.

that the ends of the conduits will just meet when all of the threads are covered and the coupling is tight. Threads cut in the field must, likewise, be cut to correct lengths.

If too few threads are cut, the conduits will not come together. Or, if too many are cut, there is danger of buckling, which might injure the insulation on the conductors, or leave threads exposed to corrosion.

Cut threads to the proper length for the size conduit used to insure a good joint and good ground continuity.

Running threads taboo

Never connect two lengths of conduit by cutting the threads on one conduit long enough so that the entire length of the coupling can be screwed on it. It is a temptation to do this in places where conduits join from opposite sides of a room and where no box is installed.

In such places, use a conduit union or threadless coupling. The National Electrical Code specifically prohibits the use of running threads on conduits for connection at couplings.

The reason for this rule is obvious. The portion of the thread which is left free after the coupling is screwed over the second conduit will no longer be protected by either the coupling or the zinc or enamel coating. Corrosion will set in, thus lowering the life of the entire installation.

Where threads are unavoidably left exposed, as in the case of a nipple, it is good practice to paint such threads with an asphaltic paint. This is especially advisable in chemically corrosive atmospheres.

It is also a good idea to touch up any spots where the enamel coating on the conduit may have been accidentally chipped off.

Continuity and grounding

To make sure that the conduit system provides a continuous ground, all connections between sections of conduit and between the conduits and panels, cut-out boxes, outlet and pull boxes must be tight.

In many parts of the country, locknuts are required inside and outside of the box in addition to a bushing. This is good practice even where the local ordinance does not require it.

Locknuts are usually slightly dished. Install the dished part against the box so that the edge will bite into the metal.

The expert electrician will always make sure that the wiring system is grounded properly, and that the resistance to ground is as low as possible.

For this reason, he will take no chances when installing ground clamps. He will clean the water pipe thoroughly, removing dirt, paint, rust, or other substances which introduce resistance to the flow of electricity.

He will tighten ground clamps to the conduit and grounding electrode firmly and carefully.

Where conduit enters a building at the service panel which is installed between the incoming

(Continued on page 59)

More accurate and speedier work will result from the use of time-savers such as the outlet location marker illustrated here. It assures uniform height for baseboard, switch and bracket lamp outlet locations.

Horizontal runs of conduit in slab construction need support when concrete is poured. Blocks will serve or saddles such as shown here.

Best practice is to pass obstructions by going over instead of under. This helps eliminate water traps that lead to wire and raceway damage.

Lengthy vertical runs necessitate support for conductors at intervals. See table for spacing of supports. One type of support is shown here.

Texas co-op speeds service with modern two-way radio communication system

FM communication for better service

◆ THE BEST POSSIBLE SERVICE for members has been the aim of the DeWitt County Co-operative, Cuero, Texas.

By providing maximum service to members, the co-op believed that electricity would be more fully utilized in cooking, water heating, water pumping, illumination, and the many other uses to which it is adaptable.

This co-op also believed that over-all operating cost would be cut, because of savings in time and transportation, if two-way radio were installed in co-op vehicles.

The co-op also recognized that radio would prove invaluable in emergencies where quick remedy of a line failure was necessary. A call could be received and immediately trucks and repair equipment could be on the way—whether in a field working on a line, driving along the road, or at the office.

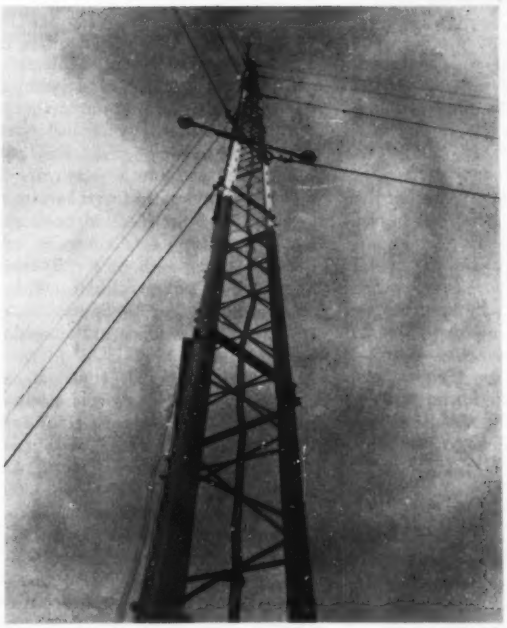
As a result, the co-op's board of directors had for several years considered the purchase and installation of two-way FM radio for DeWitt Co-op cars and trucks. Last year, such communications equipment was purchased. In November, mobile units were installed in three pick-up trucks and in Manager Fain McDougal's car.

A 145-foot antenna tower was constructed on the ranch of Mr. and Mrs. Albert Lienhard, two miles from Cuero on the highest spot in the area. To achieve the same height at the office would have required a 205-foot tower.

The transmitter-receiver station, a remotely controlled model, was installed complete with weather-proof housing at the base of the tower. The station is operated from either of two parallel remote-control consolettes, one at the office and one at Mr. McDougal's home. *(Con't. on page 59)*

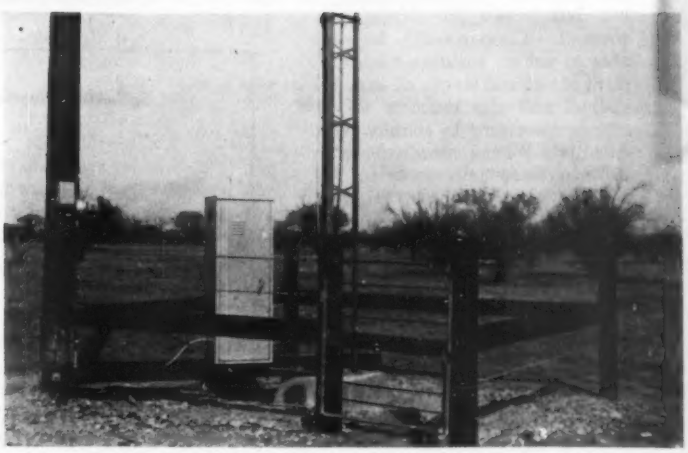
For quick remedy of line failures, DeWitt County Co-op, Cuero, Texas, installed two-way FM radio in their cars and trucks. (Left) Manager Fain McDougal, using the radio installed in his car, finds it invaluable for saving time and transportation. (Right) Manager McDougal also operates the two parallel remote-control consolettes.

(Right) Line Foreman George Meurer reports line work activities from his truck in the field. Immediately after he receives a call trucks and repair equipment are on the way.



(Left) This 145-foot transmitting and receiving tower was built two miles from Cuero on the highest spot in the area. To achieve the same height at the office would have required a 205-foot tower. The manufacturer guaranteed the system to cover the entire area served by the co-op, and a check proved that the section is well within the two-way communications range.

(Right) The transmitter-receiver station, a remotely controlled model, was installed complete with weather-proof housing at the base of the tower.



Does CMP doom adequate wiring?

Survey shows that copper limitation will not prevent certification of average-size homes under National AW Bureau standards

◆ THE RECENT LIMITATION on amounts of critical materials allocated for residential use gave rise to the questions, "What happens to the standards of electrical wiring in the residences?" and "What happens to Adequate Wiring due to these restrictions?" These questions are highly important. However, there was one additional question which prompted us to make a cursory survey of some homes of average size under construction. That question was "How many pounds of copper are used in wiring the average home and how much wiring can be done under the 35-pound limitation?"

Our Adequate Wiring representative was assigned to investigate 25 homes without reference to any particular type, builder, contractor, or location. The approach was strictly impartial in every respect. All jobs were inspected after the rough-in wiring, but before the wiring was covered. Consequently, he was able to get an accurate measurement of size and length of wire installed, and also estimate added copper necessary to comply with Adequate Wiring specifications.

Since these jobs were in the rough-in stage, minimum requirements for basements were taken. No provision for finished-off areas such as recreation rooms was made. Also, no allowance for thermostat wiring was included. These items will not affect the final result materially as will be indicated later in the survey.

On the other hand, an allowance of 20 feet of #6 wire for ground was made. This is, in the majority of cases, generous in our territory since the inspection authorities permit grounding on the nearest cold water pipe rather than connection on the supply side of the water meter.

Service entrance cable—3/#6—and 3/#8 cable for ranges was used in these installations. Few homes in our survey used heavier wire than these for purposes designated.

Will standards be lowered?

The statistics compiled from this survey present some very interesting facts, including answers to the three questions posed in the first paragraph.

If we use the National Electrical Code as a standard, I believe we can safely say that our present regulations are not going to lower standards to any great degree. The great exception may creep in where unusually large services are required for electric heating, for luxury type estate homes, or for all electric homes. These, however, do not constitute a substantial portion of residential construction today on a nation-wide basis.

An analysis of 511 Detroit area Dodge Reports for speculative homes showed 494 were under 1500-square-foot area, 17 were over. Of 58 custom homes, 43 were under and 15 over 1500 square feet of living area. It is obvious from our statistics on number of feet per pound of copper (#4-3 wire—2.6; #6-3 wire—4.1, etc.) that unusual loads or unusually long runs of large-size

Self-Authorization Limits on Copper and Steel

	Homes With Steel Pipe Water Systems		*Homes With Copper Pipe Water Systems*	
	Steel (lbs.)	*Copper (lbs.)*	*Steel (lbs.)*	*Copper (lbs.)*
Single Family Dwellings	1800	35	1450	160
Two Family Dwellings	3500	65	2750	300
Three Family Dwellings	5100	100	4100	450
Four Family Dwellings	6500	125	5200	575

Half the quantities shown may be self-authorized for an addition, extension or alteration to an existing dwelling.

These are the limits on copper and steel that may be used in the new construction of dwellings under Controlled Materials Plan, Reg. 6.

This article has been adapted from a talk made by Herbert E. Cook, executive secretary, Electrical Assn. of Detroit, before the recent annual conference of the International Assn. of Electrical Leagues, in New Orleans.

conductors exert a great influence on the installation. Again, I wish to emphasize the fact that with the Code as the basis, under normal conditions wiring standards will not suffer too much.

Of the 25 homes surveyed, 18 comply with the 35-pound requirement. The areas of these homes — living quarters — varied from 841 square feet to 2,465.

In plotting these on a graph—square foot area and pounds of copper—we find that an approximate breaking point is 1500 square feet. I do not propose this as an absolute figure but, as a guide, I believe this can be accepted.

In plotting outlets and pounds of copper we find an average range of 50 to 80 or a mean of 65 outlets with a majority in the 65 to 75 range. Thus, we can say as a guide, a residence of 1500 square-foot living area with 65 to 70 outlets can be wired within the 35-pound limitation. Consequently, with our survey as a guide, it does not seem too hazardous to say, "In the majority of cases within reasonable limits the present 35-pound limitation will not be detrimental to the present standard of wiring based on National Electrical Code requirements."

AW not out entirely

What happens to Adequate Wiring in this situation? In only three cases of the 18 do we find Adequate Wiring requirements increasing the pounds of copper to such a degree that the copper content for wiring exceeds 35 pounds. Range wiring and added outlets produce the increases. Therefore, in 60 per cent of our cases analyzed, Adequate Wiring could have been installed.

The greatest increase was equal to 11.6 pounds, 4.4 for the range and 7.2 for 22 additional outlets. The minimum increase in those still qualifying and adequately wired was 2.3 pounds, 1.5 for range, and 0.8 for added outlets.

Another interesting fact secured from our statistics was that when we took an average weight per outlet added, not including the range, to secure Adequate Wiring it amounted to .2 of a pound of copper per outlet. Translating this into feet of 2-wire, #14 circuit we get 8.4 feet. In our survey, outlets added, exclusive of the range circuit, varied from 0 to 12, an average of 6 outlets per home or 1.2 pounds of copper.

In view of the foregoing information, it appears reasonable to say that Adequate Wiring can go forward, possibly on a reduced scale, under present regulations.

The answer to our last question, "How much copper is used in wiring the average home and how much wiring can be done under the 35-pound regulation," has been partially answered already. We have seen that much can be done within the 35-pound limitation. The probabilities are that a substantial percentage of home building is going to be in a 1500-square foot category.

We recently received a set of

(Continued on page 59)

No let-down in adequate wiring promotion foreseen by NAWB in the year ahead

◆ LOCAL ADEQUATE wiring promotion in the first eight months of 1951 showed a 25% advance over 1950. The increase was cited by the National Adequate Wiring Bureau's Executive Committee, following the NEMA Annual Meeting in Atlantic City, in November. Orders for the Bureau's sales aids served as the yardstick.

The Bureau's field service, Annual Wiring Conference, production of new advertising and demonstration materials, publication of the *Adequate Wiring Reporter*, all were major factors in hiking the demand. During this period four new local adequate wiring bureaus were licensed to operate the certification plan. Certification is now promoted in 1,064 U. S. cities with 2,500 population or more.

Also singled out for special mention were two Bureau projects. One, a modest advertising campaign, prompted the purchase of several thousand booklets by consumers. The other, a five-year old advertising activity directed to home economics teachers pulled an average of 700 requests a month for the Bureau's teaching material.

Projected for 1952 is a program combining the most successful past activities with those designed to meet the materials supply situation. Included will be:

An engineered wiring plan for applications if and when the materials situation demands it.

Periodic publication of information bulletins to help meet conditions brought about by copper limitation orders.

Wiring modernization program including a campaign plan book, two direct mail folders supported by small-space ads for local use.

Small-space national advertising in *Better Homes and Gardens, American Home, Living for Young Homemakers* and *Small Homes Guide*.

Direct mail promotion to builders on the advantages of providing adequate wiring in homes.

Continuation of field service.

Publication of the *Adequate Wiring Reporter*.

Production of feature stories for use by newspaper editors.

Participation in industry meetings such as the Annual Adequate Wiring Conference and annual EEI Sales Conference.

Continuation of the Bureau's teaching projects and the advertising program in *What's New In Home Economics*.

Additional supplementary materials for use with the Bureau's special wiring demonstration chart.

Display at the American Home Economics Association convention.

INDUSTRY NEWS

Timely items relating to contractors, light and power companies, electrical wholesalers, electrical manufacturers and their agents.

OPS urges filing of service prices

♦ FIRMS offering personal services subject to price controls have been advised by James F. Hollingsworth, Atlanta district director of the Office of Price Stabilization, to file their prices before an enforcement drive gets underway in the near future. Every person or business, with a few exceptions, rendering service must file a duplicate of the list of ceiling prices with the OPS office. Included among the services covered by the service regulation are repairs on radio and television, household appliances, and miscellaneous electrical repairs.

The service regulation requires the filing and posting of prices. In general, prices for services are established under the regulation at the highest price at which a service was sold or offered during the period between December 19, 1950, and January 25, 1951. The regulation provides that the nearest competitor's prices for services not offered during the base period may be adopted.

G. E. Supply Corp. executives advanced

♦ A SWEEPING reorganization of the General Electric Supply Corp., designed to prepare the company for anticipated increases in the market for electrical appliances, radio and television, and other electrical supplies in the next few years, has brought advancement to several well-known executives of the Atlanta district office of the company.

Robert A. Clark, formerly manager of the Atlanta district, has been appointed a vice-president of the General Electric Supply Corp., with headquarters in Atlanta, to head up the newly created Southern and Southwestern sales region.

Robert A. Clark

Mr. Clark, a Georgia Tech graduate, joined the General Electric Supply Corporation in 1927. He had been manager of the Atlanta district since 1934.

Henry E. Lane succeeds Mr. Clark as manager of the Atlanta district. He became associated with General Electric Company in 1922, and has served in the Atlanta office of the General Electric Supply Corporation since 1929. He has been assistant manager of the Atlanta district since 1942.

Howard D. Peacock, who has been manager of appliance and electronics sales for the Atlanta district since 1942, has been appointed manager of the Dallas district, effective January 1. Mr. Peacock has been associated with the company since 1922 as an appliance sales specialist. In Dallas, he succeeds R. Jackson West, who is being transferred to Los Angeles as district manager.

Lincoln elected president of NEMA

♦ J. F. LINCOLN, president, The Lincoln Electric Co., Cleveland, Ohio, was elected president of the National Electrical Manufacturers Association, at NEMA's 25th annual meeting, held in Atlantic City. He succeeds C. W. Higbee, manager, electrical wire and cable department, United States Rubber Co., New York, N. Y.

Five vice-presidents and a treasurer were also elected. They are Arthur A. Berard, president, Ward Leonard Electric Co., Mount Vernon, N. Y.; J. W. Corey, president, The Reliance Electric & Engineering Co., Cleveland, Ohio; J. H. Jewell, vice-president, Westinghouse Electric Corp., Pittsburgh, Pa.; Alan F. Sheldon, president, Kennecott Wire & Cable Co., Phillipsdale, R. I.; Hoyt Post Steele, executive vice-president, Benjamin Electric Mfg. Co., Des Plaines, Ill.; and treasurer, L. G. Hall, president, Stackpole Carbon Co., St. Marys, Pa.

More capacity for rough-in materials

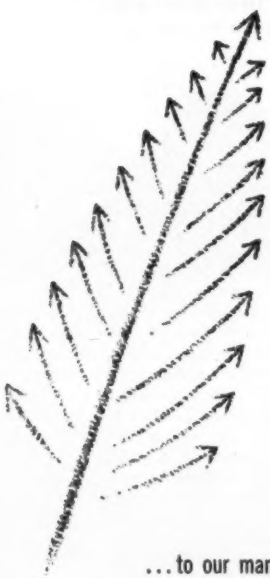
♦ NATIONAL Electric Products Corp., Pittsburgh, Pa., has purchased a million-dollar factory in Elizabeth, N. J. It will immediately start to equip the plant with more than two million dollars' worth of machinery for the manufacture of electrical roughing-in materials.

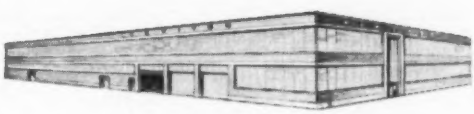
In making this announcement, W. C. Robinson, Sr., president, said the new plant, which is on the main line of the Pennsylvania Railroad, was purchased from Standard Tool & Mfg. Co., Arlington, N. J.

National Electric employs 2,000 in a large plant at Ambridge, Pa., in the Pittsburgh industrial district, and since 1948 has operated a factory at Torrance, Calif.

Mr. Robinson indicated that the Company's first plant on the Atlantic Seaboard would initially

. . . everything points to another year of Leviton progress





the New Chicago Warehouse will be in operation.

the New Leviton no. 51 Catalog is now available

. . . to our many loyal old friends
and new acquaintances who have found
us deserving of their patronage . . .

we extend the *Seasons Greetings*

LEVITON MANUFACTURING COMPANY
main office: Brooklyn 22, New York
American Insulated Wire Corporation
A Leviton Subsidiary: Pawtucket, Rhode Island

fabricate steel into rigid conduit, electric metallic tubing, busway, switch boxes, and electrical connectors. The company plans to make several new products in the new factory.

1952 officers named for Southern Section, IAEI

♦ NEW OFFICERS for the Southern Section, International Association of Electrical Inspectors, for the year 1952 were elected at the annual meeting of the Southern Section held recently in Richmond.

Russell A. Miller, electrical inspector for Tampa, Fla., was elected president. Robert E. Ward, Kenton, Tenn., was advanced to the position of first vice-president; and Joseph Snakenberg, New Orleans, La., was named second vice-president.

A. M. Miller, of Richmond, was re-elected secretary - treasurer, and Conrad V. Porbes, of New Orleans, was elected assistant secretary.

The executive committee of the Southern Section for the new year includes, in addition to the officers named above, R. B. Boyd, of Raleigh, N. C.; C. G. Butler, Decatur, Ga.; G. G. Griffin, Houston, Texas; and O. C. Smith, Laurel, Miss. Mr. Porbes was named chairman of the executive committee.

Representatives from the Southern Section on the IAEI executive council include the following: J. G. Fisher, Jackson, Miss.; W. A. Stall, Jacksonville, Fla.; N. E. Cannady, Raleigh, N. C.; D. L. Johnson, Atlanta, Ga.; E. C. Knox, Miami, Fla.; and A. M. Miller, Richmond, Va.

Carolina utilities plan system merger

♦ INITIAL ARRANGEMENTS have been completed for the merger of the Tide Water Power Company and the Carolina Power and Light Company under an agreement reached in Raleigh, N. C., recently.

Approval of the transaction was made at Wilmington, at a meeting of the directors of the Tide Water Power Co. Before the merger will become effective, however, Carolina Power and Light directors and the State Utilities Commission must approve the transaction, and the stockholders of each company must give their consent.

L. V. Sutton, president of Carolina Power and Light, announced plans to install a new 100,000-horsepower steam generating unit in the Tide Water area. It will be in addition to units already under construction at Lumberton and Goldsboro.

"It's working fine! They don't even care whether they get in to see you!"

Fire hazard inspection begun

♦ THE GREENSBORO, N. C., Fire Department has embarked on a mammoth project which entails the inspection of some 21,000 city residences and apartment units. The inspection is expected to take several months to complete.

The effort is being made to eliminate fire hazards in the home, Greensboro Fire Chief C. W. Wyrick pointed out. One important aspect of the inspection will be to check electrical outlets and receptacles to eliminate any that might be fire hazards, Chief Wyrick said.

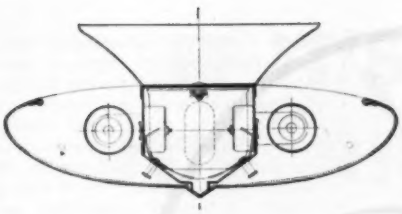
Valance lighting promoted by G. E.

♦ THE LIGHT-CONDITIONING of living rooms, with emphasis upon lighted valances, is being promoted by General Electric's Lamp Division, with headquarters at Cleveland. This promotion is the latest phase of the G. E. Home Light Conditioning Program, which has as its goal the application of 22 tested lighting recipes in the country's 40,000,000 wired homes.

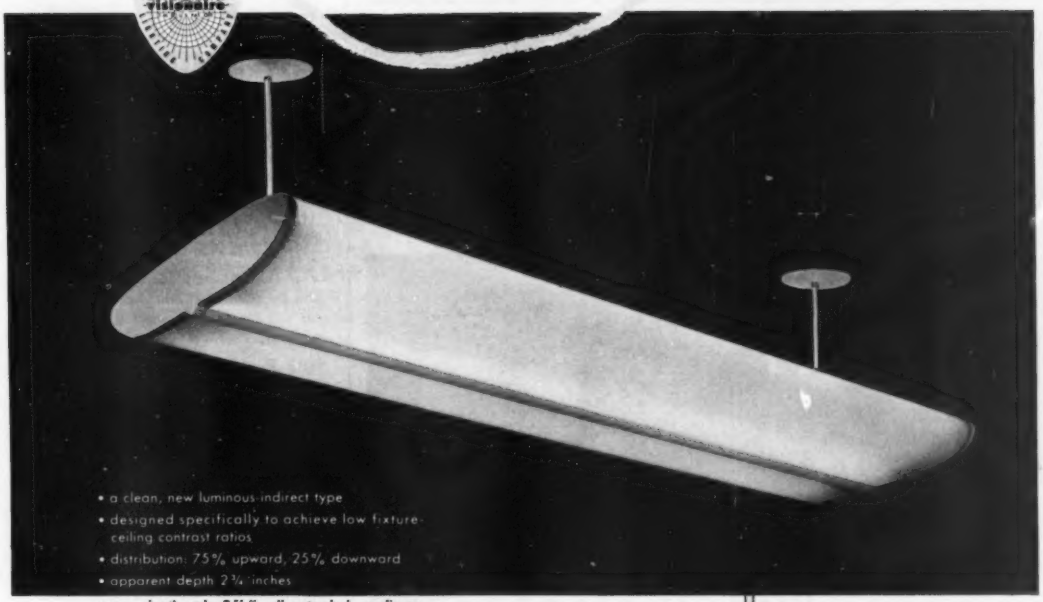
Portfolios showing how retail stores and electric service companies can participate in the promotion are being provided by G. E. They present a three-point program calling for the introduction of wall valance lighting, the promotion of portable lamps, and the combining of lighted wall valances and portable lamps to form a light-conditioned living room.

Following design suggestions made by Nela Park lighting engineers, manufacturers of lighting fixtures have produced valance lighting equipment, which promotion literature calls "one of the most important home lighting innovations in years," to highlight and emphasize the beauty in draperies and room furnishings. Stimulation of the distribution of these valances at wholesale and retail levels is being sought by G. E.

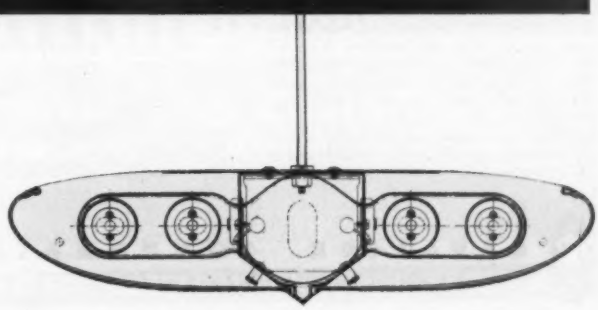
The promotion literature also points out that from 40 to 50 per cent of all portable lamps are sold in the last quarter of the year. It stresses that consumers should be reminded to look for and buy lamps that meet the specifications



everybody's happy about this new SUNBEAM design



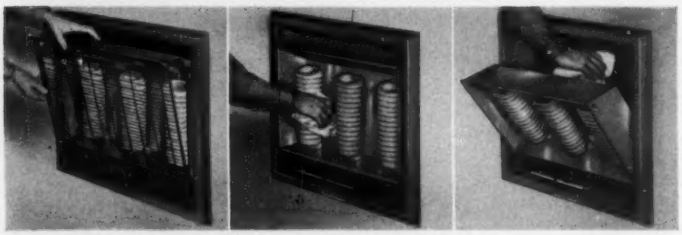
- a clean, new luminous-indirect type
- designed specifically to achieve low fixture-ceiling contrast ratios
- distribution: 75% upward, 25% downward
- apparent depth 2¾ inches
- o.a. depth only 3⅝". all extruded acrylic or styrene diffuser-reflector plastic panels. lamps removable without displacing plastic
- wiring and ballasts maintained without removing plastic panels from fixture
- designed for ceiling or pendant mounting
- 2 or 4 lamps, in all lengths and milliamp ratings
- die-formed heavy gauge metal end plates
- rolled aluminum rails support plastic edges
- spring loaded channel cover releases
- single or continuous runs
- adequate knockouts for easy installation



SUNBEAM LIGHTING COMPANY
777 EAST 14TH PLACE • LOS ANGELES 21, CALIF.

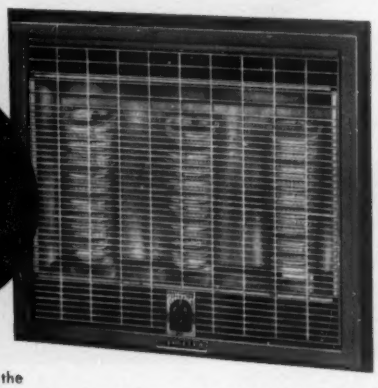
Keep it clean!

3 minutes does the job with CAVALIER exclusive construction



When you sell electric heat, one of your chief selling points is cleanliness. Yet every housewife knows as well as any heating engineer that you don't get clean heat from dirty heaters. That is one reason Cavalier Electric Wall Heaters are making a hit with home owners. With Cavalier's exclusive design, a Cavalier heater can be thoroughly cleaned inside and out in less than three minutes time . . . without the necessity of removing a single screw.

Cavalier
WALL INSERT
AUTOMATIC
ELECTRIC
HEATERS



Quick, convenient cleaning is only one of the many features built into Cavaliers. Write for the facts on complete safety protection, 30% more circulation through the elements, ease of installation, good looks, and rugged performance. Months of tests and practical trials resulted in the new Cavalier—the electric heater built to give the real satisfaction home owners are looking for.

SOLD THROUGH WHOLESALERS ONLY

Prompt Deliveries

CAVALIER CORPORATION
CHATTANOOGA 2, TENNESSEE

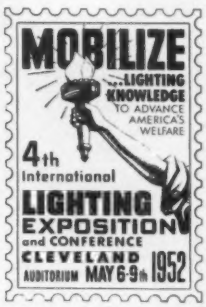
of G. E. light-conditioning recipes, and thus produce light of adequate quantity and quality for the seeing tasks to be performed.

The light-conditioned living room promotion is the second to be conducted by G. E. under its long-range program. First was a "Back to School" promotion, designed to stimulate improved home study lighting.

Lighting Exposition announces official seal

♦ To CLEARLY DEFINE and publicize its purpose and objectives, the Fourth International Lighting Exposition and Conference, to be held in Cleveland, May 6 to 9, 1952, has adopted as its official slogan "Mobilize Lighting Knowledge to Advance America's Welfare."

This slogan is incorporated in the design of the official seal of



the Fourth International Lighting Exposition, which is sponsored by the industrial and commercial lighting equipment section of the National Electrical Manufacturers Association.

The purpose and objective of the Exposition and the 1952 Merit Award Competition is to help mobilize lighting knowledge for a stronger America from the standpoint of the latest equipment, installation methods, and application techniques.

REA loans permit co-op expansion

♦ LOANS APPROVED recently for rural electrification projects by the REA totaling $1,485,000 included a $475,000 loan for the Meade County Rural Electric Cooperative Corp., Brandenburg, Ky., and a $535,000 loan for the

IF IT'S PARANITE IT'S the RIGHT Wire and Cable

PARAFLEX Non-Metallic Sheathed Cable lays flat. Won't squirm or twist. Clean to handle. Plainly marked.

PARASYN Type TW Thermoplastic Wire stands exposure too severe for rubber insulated wires. Smaller diameter.

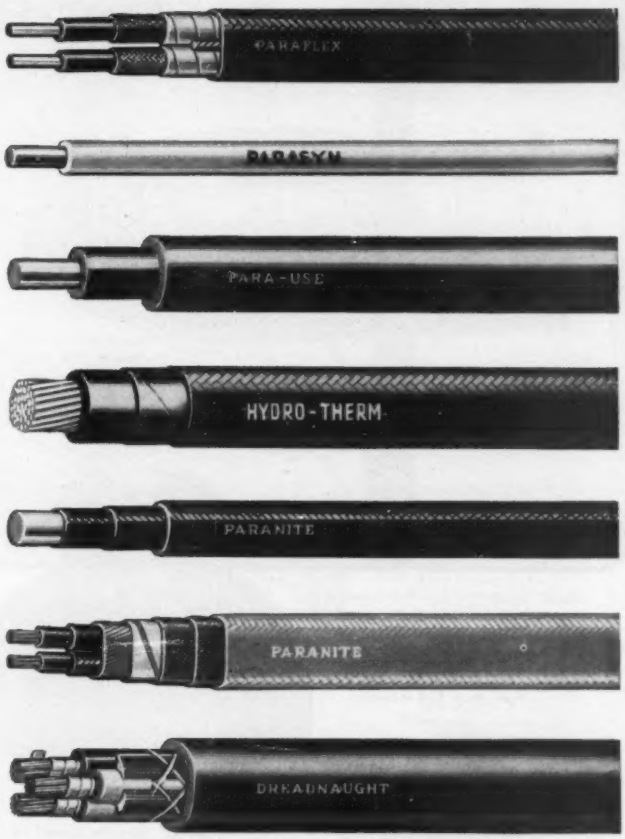
PARA-USE Type "RR" Cable provides permanent underground installation from power line to meter and for connecting several buildings.

HYDRO-THERM Building Wire combines in a single wire the heat-resistant qualities of Type RH and the moisture resistant qualities of Type RW.

URC Weatherproof Wire and Cable can be relied upon to meet severe climatic conditions. Both actual line and Weather-Ometer tests prove unusual ageing characteristics.

SERVICE ENTRANCE CABLE, Type SE Style U unarmoured and Type SE Style A armoured. There is also a Paranite Service Drop Cable, two conductor, Type SD.

DREADNAUGHT Heavy Duty Cable has lead-cured neoprene insulation. Flexible, durable, safe, long-lived. Cuts repairs and replacements. Delivers current continuously.



IF IT'S **PARANITE** IT'S RIGHT!

DISTRIBUTED THROUGH WHOLESALERS

PARANITE WIRE AND CABLE
Division of ESSEX WIRE CORPORATION
FORT WAYNE 6, INDIANA

WIRES AND CABLES SINCE 1890

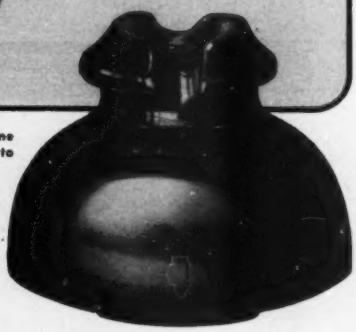
EXPORT SALES OFFICE—LIONEL-ESSEX INTERNATIONAL CORPORATION, 15 E. 26th ST., NEW YORK 10, N.Y.

ELECTRICAL WIRES AND CABLES "BETTER THAN CODE REQUIRES"

Illinois Porcelain Insulators ARE BUILT TO LAST...

Installed in 1928
STILL GOING STRONG
"Long Life" Illinois Porcelain Insulators which will provide dependable service for many years to come.

Right: Illinois Pin Type Distribution Line Insulator—one of many styles to meet all requirements.



Below: Typical Illinois Suspension Type Dead End Insulator.

● All Illinois Porcelain Insulators are designed and produced to exacting electrical and mechanical standards — completely tested and inspected to insure against breakdown on the job. This, plus a proved record in countless installations like the one shown above are your assurance of long years of thoroughly dependable service.

WRITE FOR COMPLETE INFORMATION AND PRICES

ILLINOIS
ELECTRIC PORCELAIN CO.
MACOMB, ILLINOIS

Three Rivers Electric Co-operative, Linn, Mo.

Meade County projects include 17 miles of 66-kv transmission line, headquarters facilities, and completion of previously approved construction.

The loan to the Three Rivers Co-operative will cover construction of 81 miles of distribution line to serve 176 new rural consumers, several system improvements.

NAED opens larger New York offices

◆ THE OPENING of new and larger headquarters offices by the National Association of Electrical Distributors at Norway House, 290 Madison Ave., New York City, was announced recently by Charles G. Pyle, executive director of NAED.

Dates Ahead

American Society of Refrigerating Engineers, 47th Annual Meeting, Hotel Roosevelt, New York, N. Y., December 2-5, 1951

***Edison Electric Institute,** Commercial Lighting Committee, Hotel Roanoke, Roanoke, Va., December 12-13, 1951.

***Edison Electric Institute,** Commercial Cooking Committee, Terrace Plaza Hotel, Cincinnati, Ohio, December 13-14, 1951.

***National Appliance and Radio Dealers Association,** Annual Convention, Conrad Hilton (Stevens) Hotel, Chicago, Ill., January 13-15, 1952.

***Plant Maintenance Show,** Convention Hall, Philadelphia, Pa., January 14-17, 1952.

***Edison Electric Institute,** Industrial Relations Committee in conjunction with **Southeastern Electric Exchange** Personnel Section and Southwest Personnel Group, Roosevelt Hotel, New Orleans, La., January 17-18, 1952.

***National Housewares and Home Appliances Exhibits,** Navy Pier, Chicago, Ill., January 17-24, 1952.

American Institute of Electrical Engineers, Winter General Meeting, Hotel Statler, New York, N. Y., January 21-25, 1952.

***Southeastern Electrical Wholesalers Association, Inc.,** Second Industry Day Meeting, Biltmore

Increasing membership in the association and enlargement of the staff have necessitated the move, Mr. Pyle pointed out.

The new offices are centrally located in the city and are convenient to both railroad and plane terminals. Completely air-conditioned, the offices have an outstanding lighting installation incorporating the latest in lighting techniques and fixture design.

Catalog service available to wholesalers

♦ A COMPLETE packaged catalog service is now available to electrical wholesalers, according to A. W. Powell, Jr., of Catalog Publishing Company, 2204 Cedar Springs Ave., Dallas 1, Texas. This publishing house specializes in a condensed type of book with a low unit cost.

Hotel, Atlanta, Ga., January 24-25, 1952.

***Edison Electric Institute**, Transmission and Distribution Committee, New Hotel Jefferson, St. Louis, Mo., February 14-15, 1952.

***National Electrical Manufacturers Association**, Edgewater Beach Hotel, Chicago, Ill., March 10-13, 1952.

***Chicago International Trade Fair**, Navy Pier, Chicago, Ill., March 22-April 6, 1952.

Edison Electric Institute, Sales Conference, Chicago, Ill., April 1-3, 1952.

Illuminating Engineering Society, Southwestern Regional Conference, Hotel Tulsa, Tulsa, Okla., April 6-8, 1952.

Illuminating Engineering Society, Southern Regional Conference, Hermitage Hotel, Nashville, Tenn., April 20-22, 1952.

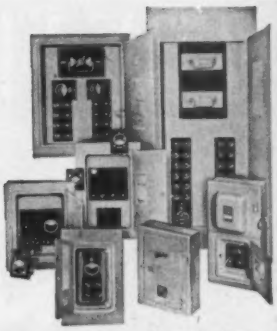
***Fourth International Lighting Exposition and Conference**, Cleveland Municipal Auditorium, Cleveland, Ohio, May 6-9, 1952.

***National Association of Electrical Distributors**, 44th Annual Convention, Atlantic City, N. J., week of June 9, 1952.

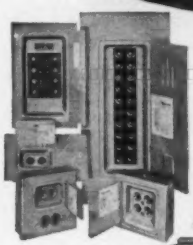
Illuminating Engineering Society, National Technical Conference, Edgewater Beach Hotel, Chicago, Ill., Sept. 8-13, 1952.

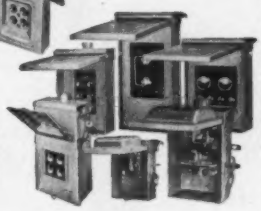
**Asterisk indicates meetings announced for the first time in this column.*

All Types of Enclosed Safety Switches


Service Equipment to Meet Every Requirement

The General Line is the COMPLETE Line


Extensive Line of Branch Circuit and Residence Panels


A Complete Line of Weatherproof and Raintight Service Equipment and Safety Switches

OFFICES AND WAREHOUSES IN THE SOUTH:

Atlanta 3, Georgia
J. A. Lloyd
375 Whitehall St.
Walnut 6248

Charlotte 2, N. C.
J. A. Lloyd Co.
2506 Lucena St.
Charlotte 5-8258

Dallas 5, Texas
Glidden Eng. & Equip. Co.
2523 McKinney Ave.
Prospect 7-5671

Houston 3, Texas
Glidden Eng. & Equip. Co.
3802 Winchester St.
Charter 6471

Louisville 2, Ky.
Thomas W. Bullock Co.
Vaughan Bldg.
3rd & Main Sts.
Clay 1277

New Orleans 12, La.
A. J. Weilbaecher
545 Dryades St.
Tulane 3189

Tulsa 3, Oklahoma
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Tulsa 2-4271

General makes a complete line of Enclosed Safety Switches, Service Entrance Equipment and Branch-Circuit or Residence Panels—all designed for *greater convenience, better appearance and long trouble-free performance.*

Send for new Catalog No. 5103 and latest price list.

General Switch Corp.
85 Roebling Street Brooklyn 11, N. Y.

THE MARK OF QUALITY

MARCUS MTC

changed. The combination of a good product with genuine interest in the customers' side of the transaction has necessitated the completion of our third and largest expansion move within the past 5 years. What better recognition of the *"Mark of Quality"!*

•

Representatives in Principal Cities

General purpose transformers, 600 volts and below; 1-15 KVA inclusive, single or three phase.

450 KVA, Type F Unit Substation, 4160 V. Delta, 60 Cycles, 3 Ø— 120/208Y, 4 wire.

PIONEERS IN THE FIELD OF AIR-COOLED TRANSFORMERS

MARCUS DRY TYPE transformers

NEMA

ONE OF THE WORLD'S LARGEST MANUFACTURERS OF DRY TYPE TRANSFORMERS EXCLUSIVELY.

.1 to 2,000 KVA up to 15,000 Volts to meet Individual Requirements

• DISTRIBUTION • GENERAL PURPOSE • UNIT SUBSTATION • PHASE CHANGING • ELECTRIC FURNACE • WELDING • MOTOR STARTING • SPECIAL

MARCUS TRANSFORMER CO., Inc.

NAMES IN THE NEWS

According to a recent announcement by **Ralph F. Butler,** vice-president in charge of the Eastern division of **Unistrut Products Co.,** new Southeastern district sales offices and warehouse have been opened at 1321 Spring St., N. W., Atlanta, Ga.

Brad Fogarty has been appointed district manager and will be responsible for sales and service in the Southeast.

Mr. Fogarty has had a broad background and experience in sales and distribution of electrical and industrial products and was formerly Southeastern sales manager for the light division of Sylvania Electric Products. He is active in the Illuminating Engineering Society and the Georgia Engineering Society.

Brad Fogarty

•

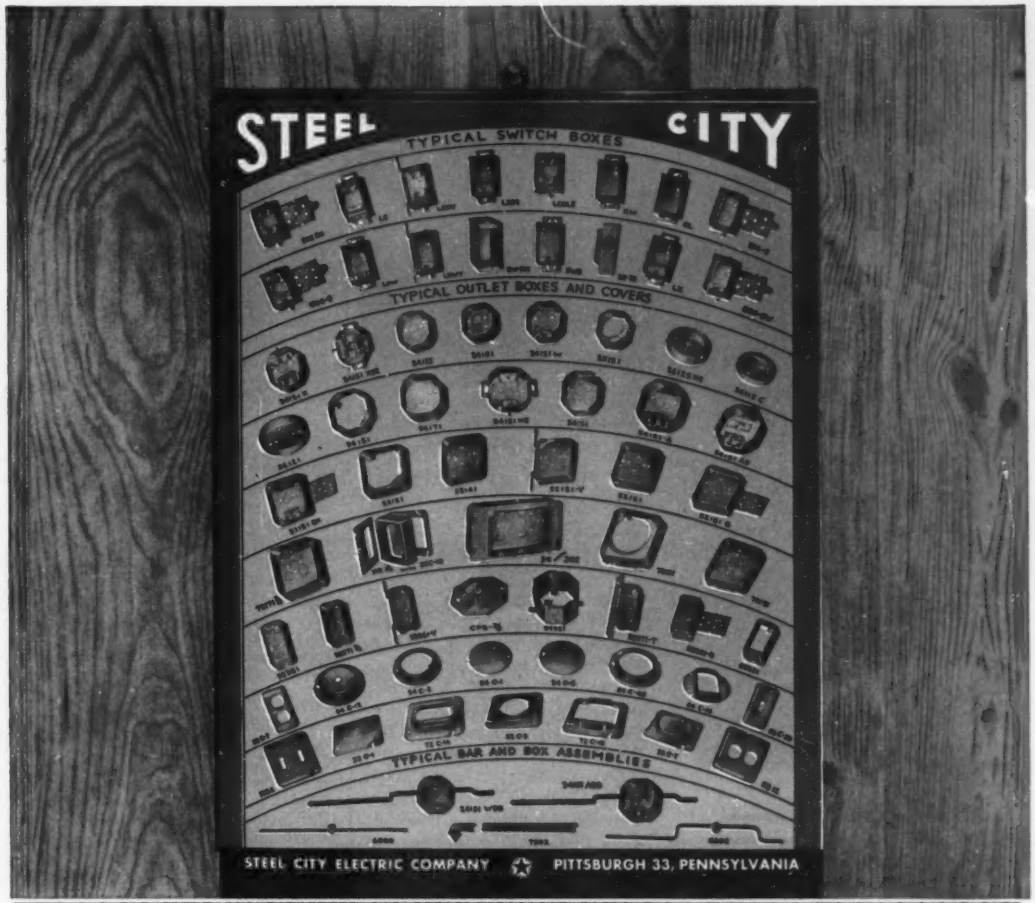
The Jones Metal Products Co., Lafayette, Ohio, has announced the appointment of a general sales manager and an administrative assistant, according to **Frank Jones,** president.

Effective immediately, **Richard P. Harner** will take over the duties of general sales manager of the Abolite lighting division. Mr. Harner will also be responsible for sales promotion activities of the company and has been named sales promotion director in the capacity. He was formerly sales manager for Tuttle & Kift, Inc., Chicago.

•

Edwin S. Lammers, Jr., Atlanta, electronics engineering supervisor for **Westinghouse Electric Corporation** in the Southeastern district, was recently elected regional vice-president for the fourth district of the **American Institute of Electrical Engineers.**

He was elected by the board of directors of AIEE to complete the unexpired term of **John D. Harper,** who recently moved to Texas.



On the wall OF YOUR OFFICE OR STOCK ROOM *This Hanger*

. . . picturing the most popular types of boxes and covers in **STEEL CITY'S COMPLETE LINE,** will prove helpful in making selections that will best meet your needs.

One - or more - of these attractive and informative hangers (16"x22") is yours for the asking.

Address your requests to . . .

CATALOG DEPARTMENT

Steel City Electric Co.

1207 COLUMBUS AVENUE, PITTSBURGH 33, PA.

Southern Representatives

EDGAR E. DAWES & CO.
401-402 Rhodes Bldg.
ATLANTA 3, GA.

GEORGE E. ANDERSON CO.
1903 Griffin Street
DALLAS 2, TEXAS

PAUL LUMPKIN
226 Builders Building
CHARLOTTE, N. C.

QUICK & BATCHLER, INC.
2323 North Charles St.
BALTIMORE 18, MD.

SANGAMO

the Time Switch with the *Automatic Memory*

The operation of this Sangamo Astronomic Time Switch automatically compensates daily in accordance with sunset and sunrise.

is often the answer to the timing needs OF INDUSTRIAL PLANTS

The growing shortage of available industrial manpower makes automatic devices more important than ever. The Sangamo Time Switch is such a device. It will solve practically any problem concerning daily sequence timing in industry. Protective floodlighting control is a typical example. So is the use of these switches for the control of manufacturing processes. Below are a few suggestions where Sangamo Time Switches can serve industry.

INDUSTRIAL APPLICATIONS

For daily pre-heating:

Lead pots for solder operations.
Zinc for injection molding.
Type metal in type foundries.
Dies in plastic molding presses.
Glue in woodworking shops.
Tanks for galvanize dipping.
Electric ovens and furnaces.
Infra-red paint dryers.
Electronic testing equipment.
Soldering irons on assembly lines.

For daily circuit control:

Yard floodlights.
Runway and hall lights.
Electric factory signs.
Pumps, compressors.
Water softeners.
Mixing equipment.
Electric doors and gates.
Air conditioning.
Alarm systems.
Exhaust fans.
Electric valves.
Two-level thermostats.

SANGAMO ELECTRIC COMPANY

SPRINGFIELD, ILLINOIS

Get the full story—write for Bulletin No. 1010E today.

STSS-7B

George C. Devine, Orlando, Fla., has been appointed Florida representative for **Hykon Mfg. Co.**, Alliance, Ohio, according to an announcement by **Jack V. Abblett**, manager.

●

Two appointments were recently announced by **W. M. Parker**, president of the **Union Insulating Co.**, Parkersburg, W. Va., at the annual board of directors meeting. **T. E. Graham, III**, formerly assistant general sales manager, has been appointed sales manager.

J. D. Arnaud, formerly in the agency business on the West Coast, has been appointed sales promotion director. He will be in charge of the promotion of "Union" products with the electrical contractors and industrials throughout the country.

●

Frank Roby, Square D vice-president in charge of sales, has announced the appointment of **M. P. Kartalia** as manager of merchandise sales, in which capacity he will help formulate distributor policy and administer it in connection with both industrial control and distribution equipment sales activity.

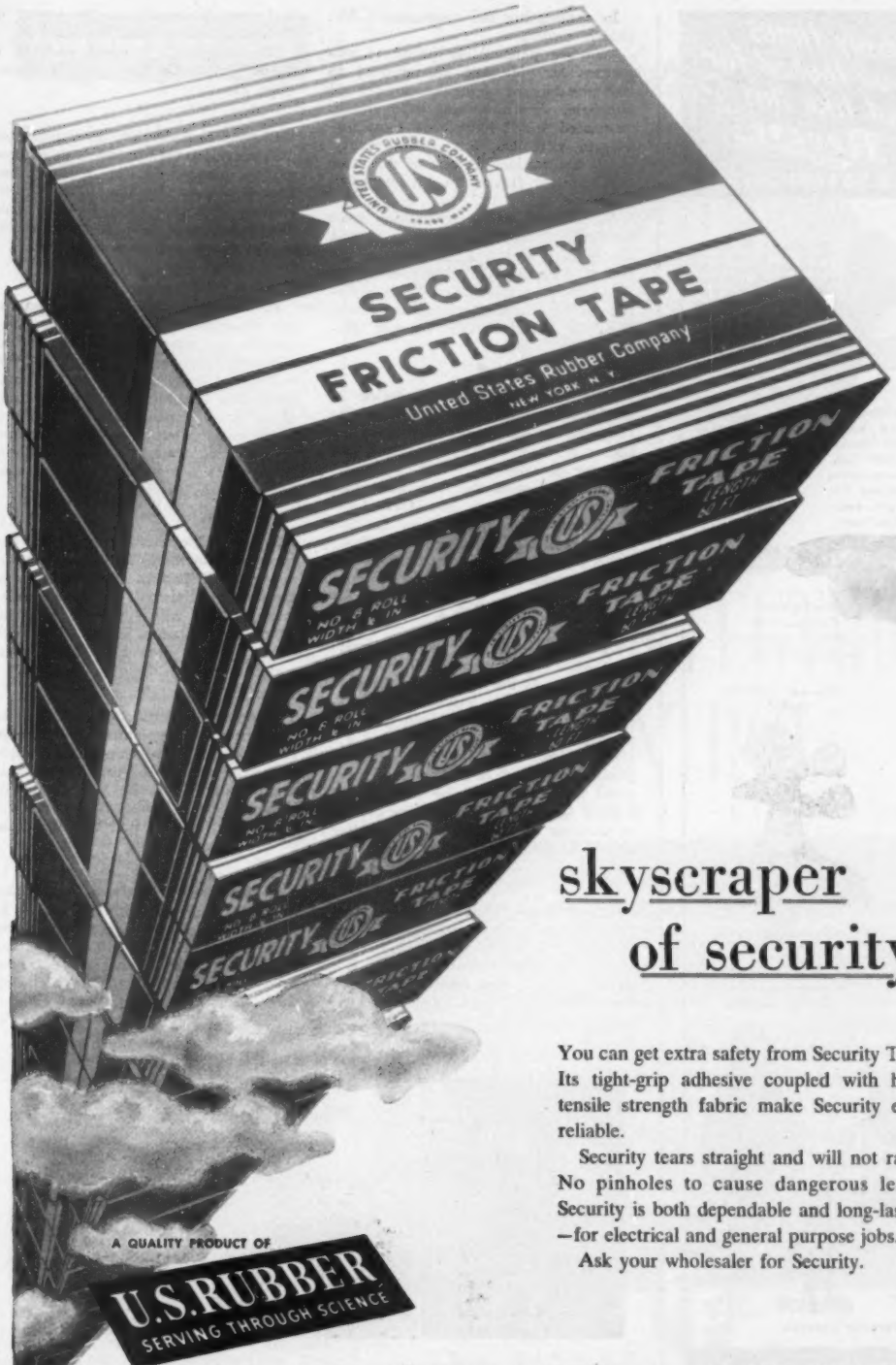
Mr. Kartalia was formerly manager of distribution equipment sales at Detroit headquarters. He will retain the latter responsibility in addition to his new duties.

●

Appointment of **Harold E. Meade**, former vice-president of New Orleans Public Service Inc., to the post of general manager of **Electrical Supply Company** of New Orleans, wholesale distributors of radio, television, electrical supplies and equipment, has been announced by **Leo. L. Hirsch**, president of the firm.

Mr. Meade was associated with the New Orleans utilities organization for more than 28 years and began his career as a cadet engineer. At the time of his resignation he had occupied the position of vice-president for some years.

Leo. L. Hirsch, left, president of the Electrical Supply Company of New Orleans, chats with Harold E. Meade, newly appointed general manager of the New Orleans wholesale electrical house.



skyscraper of security

You can get extra safety from Security Tape. Its tight-grip adhesive coupled with high-tensile strength fabric make Security extra reliable.

Security tears straight and will not ravel. No pinholes to cause dangerous leaks. Security is both dependable and long-lasting —for electrical and general purpose jobs.

Ask your wholesaler for Security.

A QUALITY PRODUCT OF

U.S. RUBBER

SERVING THROUGH SCIENCE

UNITED STATES RUBBER COMPANY

TAPE DEPARTMENT • ROCKEFELLER CENTER, NEW YORK 20, N. Y.

How many times have you looked for a Flood like this?

Revere

PAR-46 & 56 LAMP HOLDERS

Provides all the advantages of sealed beam lamps and fits a multitude of applications, where long throws from high ceilings, and outdoor uses, where a narrow beam is needed. Write today for catalog information.

Typical applications: Floodlighting water tanks, smoke stacks, monuments, fence lines, narrow passageways, flags, archery and rifle shooting targets, bowling pins, railroad yards, safety islands, traffic signals ,etc.

WHITE-WAY PYLON-LITES
To brighten Boulevards and Business Centers.

AREA and CLUSTER LIGHTS

Full Line of LUMINAIRES for Incandescent and Mercury Lamps.

COMPLETE LINE OF AIRPORT LIGHTING EQUIPMENT

HINGED POLES for Gas Stations and Street Lighting

Write for literature

REVERE ELECTRIC MFG. CO.

6005 BROADWAY CHICAGO 40, ILL.

LIGHTING EQUIPMENT FOR EVERY NEED

In announcing the appointment, Mr. Hirsch said:

"We are particularly proud to announce Mr. Meade's appointment to the position of general manager of our firm. We have long been closely associated and I have been most impressed with his outstanding ability. He is unquestionably one of the most distinguished figures in the electrical industry."

At the time of his resignation from the utility company, Mr. Meade was vice-president and a member of the board of directors, and a member of the boards of the Edison Electric Institute, The Southern Gas Association, and the Southeastern Electric Exchange.

•

The appointment of **Frederick S. Marks** as sales manager of **Rome Cable Corporation** has been announced by **Glenn E. Rolston**, vice-president and director of sales.

Associated with the wire and cable industry for 25 years, Mr. Marks joined Rome Cable Corporation in 1945 as Southern sales representative. Prior to his present appointment he has been assistant sales manager of the corporation.

•

Dr. William A. Edson has been named director of the school of electrical engineering at the **Georgia Institute of Technology**, it was announced recently by **Dr. J. W. Mason**, dean of engineering.

Dr. Edson, who until his recent promotion served as professor of electrical engineering in the school, will replace **Dean D. P. Savant**, who retired as director in July of this year after almost 30 years of service.

•

Robert Bronsvel has been named new representative for **Smithcraft Lighting Division** in a territory consisting of all of Florida, with the exception of Escambia County, and the southern portion of Georgia, from Chatham County, including Savannah, to the corner of Georgia, Alabama, and Florida.

Mr. Bronsvel's present address is Gould Rd., Rt. 8, Box 299A, Jacksonville, Fla.

•

Charles E. Rylee has been appointed assistant consumer products sales promotion manager for the **Westinghouse Electric Supply Company** in the Southeastern district. Mr. Rylee joined Westinghouse in 1949, and has served in the stores and sales departments.

•

P. W. Pullin, formerly of the apparatus department of the General Electric Co., has joined the sales staff of the **Cleveland Electric Co.**, Atlanta. **Robert deLoach**, sales manager for the company, also announced that the volume of G. E. apparatus sold by Cleveland Electric has shown more than a 100 per cent increase over 1950, and additional sales talent was needed to serve customers in the Atlanta area.

•

Sylvania Electric Products Inc. has appointed **Raymond P. Conners** to the new post of Eastern sales manager of the lighting division. As Eastern sales manager, he will supervise sales in Atlanta, Washington, Boston, New York City, Buffalo, Newark, Philadelphia, and Pittsburgh.

•

Rome Cable Corp., Rome, N. Y., has announced the appointment of **George W. Acock** as product application engineer. A member of the Rome Cable Engineering Dept., he will make his headquarters in Rome, N. Y., and will cover the Southern and Western areas of the country.

•

G. H. Baumann has been named sales manager of the **Feedrail Corp. F. L. Novak**, Feedrail president, in making the announcement said that Mr. Baumann's appointment was made in the interest of expanding and bettering their engineering and sales service.

NEW SQUARE D APPOINTEES—Three new Southeastern regional men for Square D Company are, left to right:
K. D. Hightower, field engineer on the company's Jacksonville sales force; R. C. Quick, Charlotte district manager; and R. M. Ferguson, field engineer on the Charlotte sales force.

NEW PRODUCT NEWS

Thermwire cable

THERMWIRE, a new flexible electric heating cable, has been introduced to the industrial and consumer fields by Edwin L. Wiegand Co. The cable consists of a heavy-gauge nickel-chromium resistor wire with tough abrasion-resistant insulating sheath.

Equally useful around home or plant, Thermwire protects roofs, gutters, and

downspouts from dangerous and costly accumulations of snow and ice.

Embedded in asphalt or concrete, it melts ice from hazardous home, shop, and office doorways, steps, sidewalks, driveways, or other pavements where severe and costly accidents occur.

It prevents freezing of pipes. The cable also heats soil for faster seed germination and plant growth.

Thermwire provides an easy solution in many circumstances where a portable, pliable, efficient heat source is required on-the-spot to cope with cold weather problems.

More information on Thermwire and where to obtain it is available from Edwin L. Wiegand Co., 7600 Thomas Blvd., Pittsburgh 8, Pa.

•

Infrared brooders

A NEW CATALOG bulletin, No. 130-52, covering their expanded line of infrared heat lamp brooders has just been released by Steber Mfg. Co.

This new bulletin illustrates and describes single-lamp, three-, four-, and six-lamp units. Some of the units are equipped with switches for manual operation; others have automatic thermostatic control.

The bulletin is available upon request to Steber Mfg. Co., Broadview, Ill.

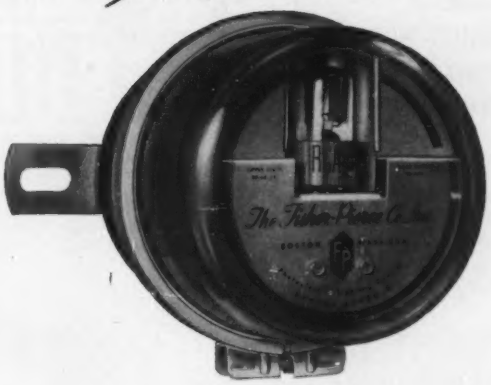
•

Vertical bus duct hanger

A NEW TYPE HANGER for supporting vertical runs of bus duct is available from Westinghouse Electric Corp., Box 2099 Pittsburgh 30, Pa.

This new hanger permits the duct to be spring-mounted so that its weight

Improved....



Series 63300 B

FISHER - PIERCE

PHOTOELECTRIC CONTROL

FOR STREET LIGHTING

This new Fisher-Pierce Control is the result of long experience in design and manufacture, combined with practical experience of more than 600 electric utilities in more than 20,000 installations.

The new 63300 B Control is mechanically and electrically interchangeable with existing controls. The same dependable Fisher-Pierce circuit, consistently giving tube life of more than 20,000 hours, has been retained. Improved spacing and insulation provides increased protection against lightning damage . . . up to 2500 volts rms Hipot. Mechanical design has been altered to provide maximum simplicity for greater economy of servicing.

The FISHER-PIERCE Co., Inc.

59 PEARL STREET, SO. BRAINTREE, BOSTON 85, MASS.

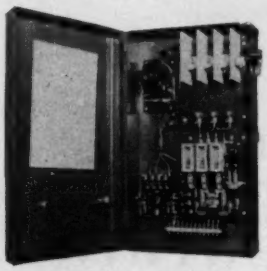
MONITOR

MAKERS OF

HIGH QUALITY MOTOR CONTROLS FOR OVER SIXTY YEARS

Real pioneering in motor control manufacture . . . Yes, MONITOR Controller has done just that since 1888. In truth, MONITOR history is the history of electrical control.

The next time you order . . . be sure to specify MONITOR!



Special NEMA No. 1-A Semi-Dust Type Enclosed Magnetic Starter

Custom-Built Oil Tight Control Station

The MONITOR CONTROLLER CO.

Braintree 84, Mass.

REPRESENTED BY

B. S. WOODMAN
1570 Northside Ave.
Atlanta, Georgia

L. L. ROUSSEL
312 E. Livingston St.
New Orleans, La.

LYNN ELLIOTT CO.
322 M & M Building
Houston 2, Texas

is uniformly carried by all support, and is distributed equally during expansion.

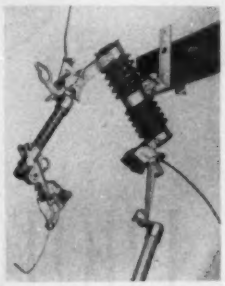
A recent modification of this hanger permits the supports to be located anywhere along the duct. It requires four holes to be drilled in the duct housing and bolting the hanger in place.

●

Fuse cutout

A NEW TYPE of fuse cutout which may be used to break charging, magnetizing, and load currents, has been announced by the A. B. Chance Co., Centralia, Mo.

This new cutout, called the KO-L, has a load-break lever that is pulled with a disconnect stick or similar tool



to interrupt the circuit inside the cutout to open in the same manner as when the fuse is blown by an overload or fault.

When blown by overloading or fault current, this new cutout opens by kicking out at the bottom. This action makes possible a mechanical time-delayed separation of contacts. Link ejection is completed and arc extinguished in the tube before the contacts part. This prevents pitting and burning of contacts, eliminates contact maintenance, and reduces radio and television interference.

Tests show the new cutout gives over-all protection from light overloads to heavy fault currents. The load break device is optional.

●

Motor controls digest

THE Clark Controller Company has just released a new edition of their "Controls," a digest of motor controls.

This 88-page illustrated book contains essential information on the complete line of Clark a-c and d-c motor starters, motor control centers, contractors, relays, and other accessories. Included are open and closed views of the more popular items, general descriptions, applications, enclosures, outline dimensions, catalog numbers, and list prices.

The contents of the book are arranged for convenience and speed in referring to desired information. A numerical index on the first page, correlated to a marginal indexing system on each page, further simplifies the locating of any specific item among the thousands of models covered in this handy reference book.

The Clark "Controlog" is available if requested on company letterhead from E. C. Roberts, The Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

●

Industrial unit

A NEW RLM industrial unit announced by Keystone Electric Manufacturing Company is available as a two- and three-light 40-watt fluorescent lamp fixture with standard or turret sockets.

A two-85-watt fluorescent lamp unit is also available. Slimline fixtures for two-48 T12 and two-96 T-12 lamps, using ballasts for 430 MA operation, are included in the series.

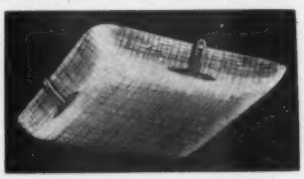
Information and prices on these units are available from Keystone Electric Mfg. Co., 2228-36 E. Tioga St., Philadelphia 34, Pa.

●

Hug-the-ceiling fixtures

A NEW GROUP of 15 ceiling fixtures, additions to Lightolier, Inc.'s Universal Pacemaker collection, is being introduced by Lightolier, Inc. Styled to suit current fashion trends in traditional, provincial, and modern homes, the flat-to-the ceiling fixtures offer new finishes, new colors, and new clasps.

Many of the new fixtures are engineered to provide three-way light and dramatic lighting effects. With the exclusive "Colouvered" lens, the fixtures offer a choice of soft over-all lighting, dramatic downlight on a single object, and a radiant combination of the two.



New in the collection are these fashion effects:

(1) A textured glass surface that picks up and accents the textures characteristic of the best in new drapery and wallpaper patterns.

(2) A pebbled pattern glass surface that complements nubby rugs and upholstery fabrics.

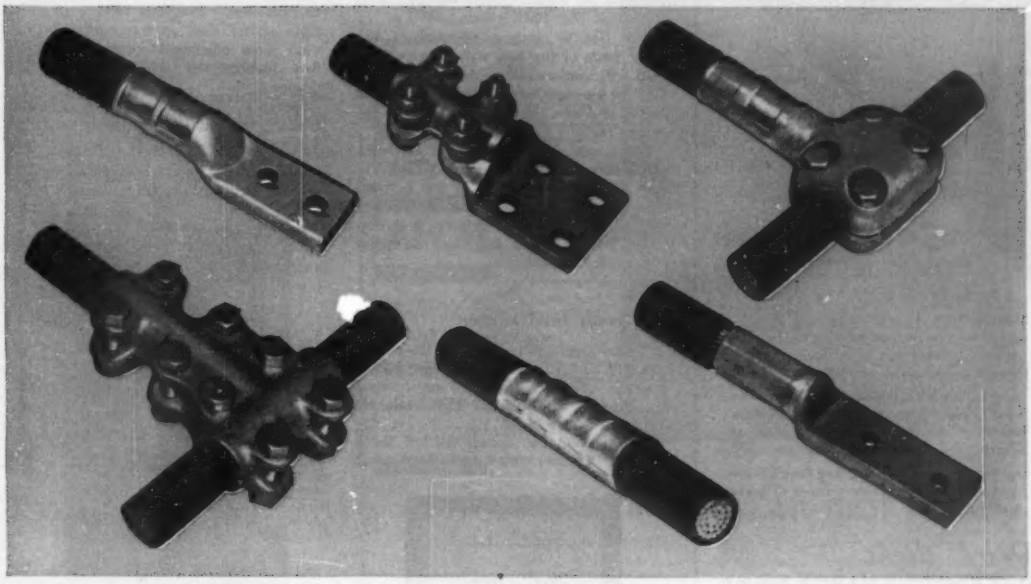
(3) A new glass-on-glass technique that gives off "star-fire" and gleams when the fixture is lighted.

(4) A new design and color—delicate spreading leaves and flowers on Wedgwood blue and a warm grey.

(5) New silver-plated, non-tarnishing clasps in a colonial doorknocker design for Provincial interiors.

(6) A new fused glass bead pattern and a new scattered star pattern that add sparkle to traditional or modern

connecting Aluminum Conductor?



Leading manufacturers of cable fittings are now supplying well designed fittings specifically for making connections of the various types in the popular sizes of insulated aluminum wire and cable.

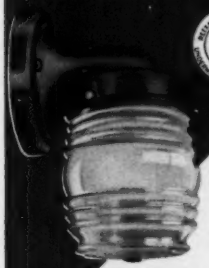
Illustrated above are typical fittings offered by several of the leading fittings manufacturers. Further details are available from the Alcoa sales office nearest you, or, ALUMINUM COMPANY OF AMERICA, 1778M Gulf Building, Pittsburgh 19, Pennsylvania.

Aluminum Conductors

ALCOA ALUMINUM

of ALCOA EC ALUMINUM are made by leading manufacturers

Non-Metallic
FIXTURES



No. 179
Accommodates
Standard
3¼" Globe

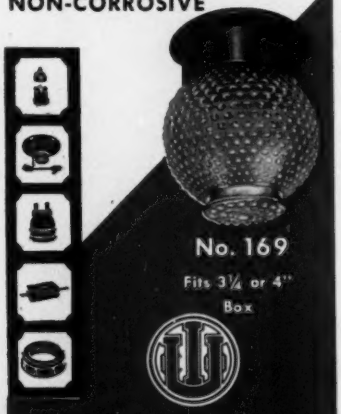
Entrance Light
NON-CORROSIVE!
NON-STAINING!

These fixtures are molded of Non-Corrosive and Non-Staining Bakelite. Thus they prevent the unsightly staining of the paint so often evident with the conventional metal fixtures.

On the sea coast where salt laden atmospheres rapidly destroy metal fixtures, UNION'S Non-Metallic fixtures are unsurpassed.

No. 169 is also Dust and Bug Proof, thereby eliminating the constant chore of globe cleaning.

Porch Light
BUG PROOF - VAPOR TIGHT
NON-CORROSIVE



No. 169
Fits 3¼ or 4"
Box

UNION
INSULATING CO.
PARKERSBURG, W. VA.

rooms. New maize-gold colors and new linen textures for modern interior schemes.

All of the new fixtures offer simplified installation through clasps at the edges of the glass and the elimination of the center button.

•

Non-metallic box

NEW NON-METALLIC, two-clamp four-wire boxes, No. 4060, have been announced by Union Insulating Co., Inc., P. O. Box 351, Parkersburg, W. Va.

Two No. 36 clamps mounted at opposite ends of the box will take various sizes of non-metallic sheathed cable The boxes are of a 4-inch, octagon shape, and are 1½ inches deep and 1⅝ inches high.

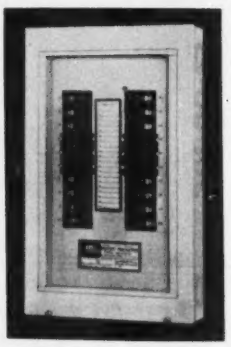
There are two 21/32-inch diameter knockouts on each side, and one ⅞-inch diameter knockout in the bottom. Outside diameter is 4 inches. The boxes are listed by Underwriters' Laboratories, Inc., and are described on catalog sheet F-13A.

•

20-circuit load center

A NEW load center with a 20-circuit capacity featuring fully magnetic action in each breaker, has been announced by Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16, N. Y.

Fully magnetic action differs from thermal devices, such as fuses and



thermal-type circuit breakers, in that its operation does not change with varying temperatures. It carries 100 per cent of its rated load.

Opposite polarity is provided in each adjacent position by the molded bus construction. This gives the maximum flexibility of circuit connections. It provides any combination from ten two-pole circuits, 125-250 volts a-c to 20 single-pole circuits 125 volts a-c.

The bus bar arrangement is of a one-piece construction, with two bus bars (one behind the other) molded into an insulating plastic. This reduces the box width to 12 7/8 inches.

The case is finished with baked-on grey Melamine — surface or flush mounting.

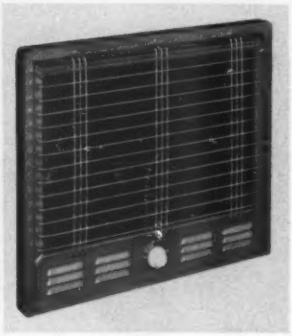
Radiant heating panel

A NEW electric heating panel has been introduced into the field of radiant heating by the Berko Electric Mfg. Corp.

The Berko panel is completely different from other panels in its construction, its makers have announced. The unit produces radiant heat rays by means of a Pyrex glass sheet backed by a solid conductive coating which is 16-millionths of an inch thick.

Thus it has no grids or glowing coils to burn out. Two bus bars with multiple silver clad spring contacts provide sure electrical contact with the two terminating edges of this conductor.

Berko's "Zone Control" is another feature that makes the panel suitable for auxiliary as well as primary heat-



ing. Governed by thermostats, the panels can maintain different temperatures in different rooms of the same building. Heat can be reduced in rooms not in constant use, like guest rooms, game rooms, attics; temperatures can be kept higher in other rooms such as the bathroom, nursery, etc. Three types of panels are available: Standard, Select-A-Temp (with built-in thermostat), and Select-A-Temp, Jr. (for use in small rooms).

The panel is easy to install, to clean, and to maintain. The element itself is tinted daylight blue; its chrome-like guard is unobtrusive.

Further information on the panel is available from the Berko Electric Mfg. Corp., 179-05 Jamaica Ave., Jamaica 3, N. Y.

•

Remote-control wiring

A NEW BOOKLET covering the subject of higher-voltage wiring for office buildings with the fluorescent lighting control relay that is rated to handle trol switches, has been published by the construction materials division of General Electric Co.

The use of 480Y/277-volt distribution for office building lighting has been made economically practicable by

the recent introduction of a remote-controlled by low-voltage remote-con-277 volts.

All the important phases of this new application of higher voltage are covered in this booklet, including a discussion of the savings of installed cost of equipment and wiring and the important savings of critical materials that are effected by the use of this system.

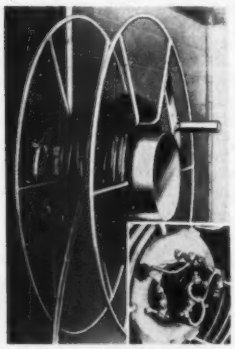
This publication, No. 16-571-A, is available without cost from the manufacturer.

•

Wall-mounting Powereel

A NEW compact wall-mounting Powereel that can be permanently mounted in or on trucks, walls, and other places to make handling of heavy electrical cable easier and more efficient, is being manufactured by Industrial Electrical Works.

In order to handle or transport cable having a stationary application, the new model has a special mounting flange



on the side so it can be fastened to a base securely and solidly by the use of four ⅜-inch bolts. This flange is threaded to fit a 1-inch iron conduit or afford a water-tight connection for flexible feeder cables.

While the size of the cable governs the amount which can be wound onto the reel, this new model will accommodate sizes up to No. 4 four-conductor cable.

Although the new reel is sold without cable or plugs, the manufacturer will, on request, supply any available cables or plugs to order.

Descriptive literature and prices are available on request from Dept. 9, Industrial Electrical Works, 1511 Chicago St., Omaha 2, Neb.

•

New ballast publications

TWO NEW PUBLICATIONS on fluorescent lamp ballasts have been announced as available from the General Electric Co., Schenectady 5, N. Y.

The first, a 20-page, three-color booklet, GEA-5731, explains in non-

More and More PROFIT
BUILDERS and CONTRACTORS WITH ELECTROMODE

Automatic Temperature Control
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Deliver Today-Heat Tomorrow
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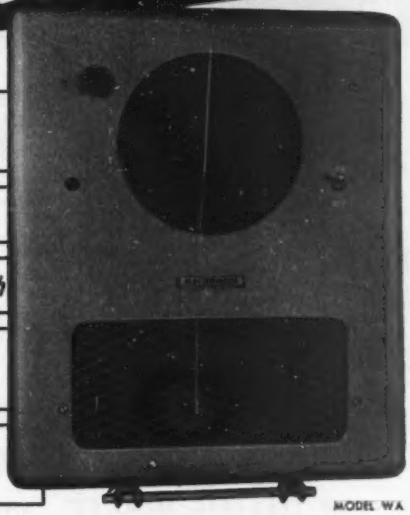

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- Patented, Cast Aluminum Lifetime Heating Element has no exposed wires . . . no danger of fire, shock or burn.
- 100% Automatic Cut-Off Safety Switch prevents overheating.
- Exclusive Down-Flo Heating provides maximum heat distribution from floor to ceiling and eliminates wall smudge.
- Quiet, Long-Life Motor gives silent operation. Never needs oiling.
- Built-in Thermostat maintains any desired room temperature from 55° to 85°.
- Attractive Silver-Grey Finish blends with home furnishings.
- Approved by Underwriters' Laboratories and Canadian Standards Association.

Available in 1500, 2000, 3000, 4000 watts for 240 volt service. Also 1500 watts for 120 volt service. Front plate: 17" wide, 21" high. Extends 1" from wall. Wall box is 4¼" deep and fits between standard wall studding.

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Automatic WALL-TYPE BATHROOM HEATER

Perfect for bathroom or any small room. Has all the safety features shown above. Available in white or chrome finish, automatic or non-automatic. 1320 watts, 110 volts, 4508 B.T.U. Front plate: 11½" high, 12⅞" wide. Extends 2" from wall. Wall box 3¾" deep, fits standard wall construction.

Electromode makes a full line of wall and portable fan-circulating heaters for home, industry, business and farm. Available through leading electric wholesalers.

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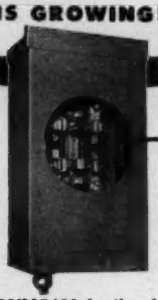

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Type HD
Heavy Duty
Device

SELF-CONTAINED METERING OF LOADS UP TO 200-AMPERES

. . . For POLYPHASE 1-, 2-, or 3-phase 3-wire installations—The new Type MH-25 50-ampere meter.

. . . For SINGLEPHASE DEMAND—The Type TF-SE 50-ampere, 240-volt, 3-wire single-phase watthour-thermal demand meter (48 KW).

. . . For SINGLEPHASE—The Type MF-SE 50-ampere, 240-volt, 3-wire meter.

THE DUNCAN family of Heavy Duty Equipment is continually growing in size and acceptance. By the elimination of current transformers for load currents between 100 and 200 amperes, appreciable savings are made in installation cost and mounting space. There is no better method of metering 1-, 2-, or 3-phase 3-wire services. Try these Duncan Heavy Duty combinations on your next installations in this capacity range.

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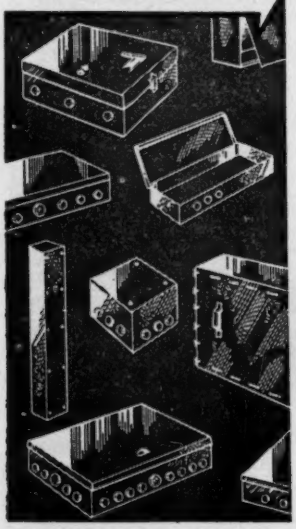

B&C
METAL
STAMPING
CO.

NEW ADDRESS — 590 MEANS STREET N. W. — ATLANTA, GA.

technical language how a fluorescent lamp works and the part the ballast plays in its operation. Illustrated with cartoons and diagrams, the book reviews the role of the ballast in modern fluorescent lighting and the contributions it has made to the industry.

Of a more technical nature, the second publication, GEA-5672, deals with General Electric's radical new system of "sound-rating" its ballasts. The four-page, two-color brochure describes how the company's ballasts are classified according to the amount of natural hum they emit.

It explains how these ratings can be put to use by fixture manufacturers, electrical contractors, and architects, and gives a typical example of application. The booklet includes a table listing the catalog numbers of G. E. ballasts according to their sound ratings from Group A (extremely quiet to Group F (quite audible).

●

Low-cost panelboard

NEW Narro-Unit panels, announced by Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J., are a low-cost fusible panelboard specially designed to meet conditions where space limitations are a factor.

Where width is a factor, single-row construction is advised using either the switch and fuse NTPR or the plug fuse only NPR panel. These panels are

only 13 inches wide yet have 4-inch gutters. This 13-inch width permits mounting the panels between building studs, which are usually on 16-inch centers.

The electrician will appreciate the fact that no tools are necessary to remove either the front or panel. A fact to be considered for safety is that there are no screws on the cover. When the door is locked, the front cannot be removed.

AW under CMP limits

(Continued from page 39)

blueprints for a speculative builder from a distant city, with a request to develop an "engineered or planned wiring" layout. This home was one story, 1120 square feet in area. On completion of the layout, the results were found to be amazing. The layout included Adequate Wiring and an electric clothes dryer. Total estimated copper needed for this job as engineered was 23 pounds! If we wish to make a 15 per cent allowance for "unknown conditions," which might necessitate an increase in copper needed, we would have a total of 26.45 pounds. Compare this with a house of similar design and area which we surveyed—one of 1042 square feet—a good speculative home. This house used 31 pounds of copper. We cannot say that planned wiring in itself was responsible for the saving in copper. However, there is a definite indication that it saves some. Even if it were only one pound, in a 100-home project you could save enough copper to wire three additional homes of like size.

Our survey indicates that there are five factors which influence the amount of copper required to wire a house:

(1) Service location.

(2) Location of major appliances with respect to service location.

(3) Possible use of "load-center" plan with feeders going to central distribution from service instead of numerous long runs for circuits.

(4) Systematic planning of installations with copper conservation as the goal.

(5) Local regulations which tend to be restrictive in nature.

Similar surveys in other localities may produce somewhat different results, but we believe that the following conclusions will apply generally:

(1) The trend is toward smaller-type housing. This is the Federal program, and it is accepted by the public—voluntarily or otherwise.

(2) There will be definite restrictions and barriers caused by individual conditions including service location, local regulations, and number of heavy duty circuits.

(3) Planned or engineered wiring may be a determining factor in many installations in order to conserve copper.

(4) Basic requirements for Adequate Wiring in popular sized or project homes can be fulfilled within the 35-pound limitation.

FM communication

(Continued from page 36)

The manufacturer guaranteed the system to cover the entire area served by the co-op. A check by Mr. McDougal, who drove the outside boundaries of the co-op area, showed that the mobile units could communicate from anywhere along the boundary roads. Here was proof in this instance that the entire section was well within two-way communications range.

Steel raceways

(Continued from page 35)

conduit and the point where the ground connection is made, it is unwise to rely entirely on locknuts and bushings for electrical continuity.

Electrical disturbances may occur in the wiring system, both inside and out, that call for a good ground connection at this point.

To insure continuity of the ground, install a bonding jumper between the outside conduit and the ground connection. Use bonding bushings for this purpose. This is especially important in boxes which have concentric knockouts.

The more out of the way the ground connection, the safer the installation. A good electrician will take pains to fasten the grounding conduit tightly to the wall, and will attach the ground clamp to the water pipe at a point where it will not be hit.

Grounding conduits that stick out from the wall, and ground clamps that people fall over, will not stay tight very long. A loose ground connection is as bad as none at all. A ground connection that is out of the way should remain effective throughout the life of the installation.

CEIL-HEAT

ELECTRIC RADIANT CEILING CABLES

SO EASY TO *Install!*

MR. R. M. CONDRA
Contractor-Engineer
Nashville, Tenn.

"Before we knew it, Ceil Heat was installed and the plastering was done in our 48-unit Skyline Apartments, completed last year. The installation costs were equal to or less than other types of heating equipment—and comments from occupants have been extremely gratifying."

THERE is no faster, or cheaper method of installing a complete modern heating plant to furnish maximum comfort and convenience, than with Ceil Heat. Now, everyone can enjoy carefree, automatic heat with the revolutionary electrical ceiling cables that provide *invisible* radiant heat from above—just like the sun.

THOUSANDS OF USERS—In Tennessee and nearby states where Ceil Heat was first installed users report that it has withstood the severest winter of a lifetime—has kept their homes cozy-warm even on the coldest days.

NEW FREEDOM OF DESIGN—Ceil Heat makes it easier for architects to design more beautiful, more efficient homes by utilizing space formerly needed for registers, radiators, pipes, furnace, fuel storage, and cellar.

EASY TO ESTIMATE - EASY TO INSTALL—Just staple the cable to the ceiling base according to simple Ceil Heat engineering directions, and cover with plaster. Quickly installed by a local electrical contractor. Simple to calculate heat loss and cable required.

SAFE—Invisible Ceil Heat is out of reach of fingers, furniture and drapes, yet it keeps floors toasty warm. Its low temperature makes it the safest heating system from standpoint of fire, burns or explosions.

TROUBLE FREE—Ceil Heat is waterproof, non-corrosive—nothing to get out of order. Fully acceptable for FHA financing, G.I. insured loans, etc.

CEIL HEAT IS THE STANDARD—Radiant ceiling heating is now used in homes from coast to coast. There is no finer system for uniform, low-cost carefree warmth. And, Ceil Heat sets the standard. Perfected solely by Ceil Heat Div., Homes, Inc. Sold only through electrical distributors to approved licensed electrical installers.

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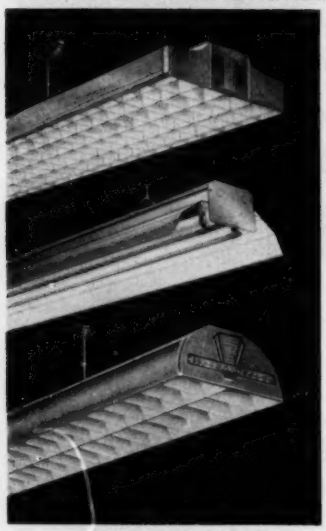

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HELWIG SPEER

Wherever possible, the entire raceway system should be completed before pulling in the conductors. If the conductors are installed before all the work on the building is finished, it is possible that some wires may be broken or that the insulation may be damaged.

The National Electrical Code, Article 3013, requires that the raceway system be completely installed without the conductors until all the mechanical work that is likely to injure the conductors is completed.

Draining conduit systems

Long runs of conduit that do not terminate in some kind of a box may have to be drained. Sometimes moisture condenses in the system, and collects at the lowest point.

Suitable drain-type fittings may be installed, or small holes may be drilled or filed in the conduit. Burrs can be avoided by reaming the hole with a slightly larger drill or a suitable reamer.

When the conduit terminates in an outlet box, pull box, or cabinet, it is not usually necessary to take special precautions in regard to drainage. Boxes are normally exposed to the air so that whatever moisture may collect will quickly evaporate.

Do not attempt to pass an obstruction in the path of a run of conduit by going under it, even though it seems to make a neater job. If at all possible, it is much better to clear the obstruction by going over it.

There is always a possibility that moisture may condense in the raceway. If this happens, it will drain into the water trap which results from under-passing an obstruction.

Water, when it stays permanently in the conduit, may corrode the conduit, and will damage the insulation of the conductors if they are not of the water-resistant type.

In flat slab construction, long, horizontal runs of conduit must have supports installed at regular intervals to prevent sagging. Without such supports, there is always the possibility that one or more sections of the run will sag

and form a water trap.

These supports may be either blocks or saddles. The electrician can easily bend these saddles from sheet steel or other suitable material. It is important to see that the saddles are securely held in place so that they will not bend or move when the concrete is poured.

Use the proper anchoring devices for exposed runs on masonry surfaces so that the conduit will not loosen after installation. Never use makeshift devices. There are a great number of good anchoring devices on the market, and a suitable type for every condition is readily available.

Never use wooden plugs, no matter how tight the fit. Wood, even when well seasoned, will shrink over a period of time, and, under certain conditions, it will decay. Either of these occurrences will cause the conduit to become loose in spite of all the time spent in making a tight job.

After the roughing-in of conduit has been finished and the outlet boxes are installed, fill up each box thoroughly with scrap paper. This will eliminate the nuisance of having the box and part of the conduit filled up with concrete or plaster when the floors or walls are laid.

Even though every box must be emptied of paper before the wiring devices can be installed, this is easier than removing broken pieces of plaster or concrete from the inside of a run of conduit.

Anticipate chases and holes

In masonry construction, where conduits must be run in chases, much unnecessary work will be eliminated if the builder knows in advance the size and location of these chases. This information will enable him to form the chases as part of the construction process and save subsequent cutting.

For the same reason, where holes or openings have to be provided through heavy walls to receive the conduit, the builder should be informed so that he can include them in the construction work.

The electrician should co-operate as much as possible with the other trades and should be constantly on the alert for alterations which may be made to the original plans.

If he is not aware of such changes, he may run into unnecessary trouble. This is especially true in larger buildings of fireproof construction.

If the positions of plumbing fixtures or partitions are changed, for example, necessary allowances for such changes must be made in roughing-in. Otherwise an outlet that is supposed to be centered above the lavatory, for instance, will be off to one side or another.

Close contact with the other trades can forestall trouble of this sort.

On every job, a great number of outlets must be installed at exactly the same height. Most convenience outlets, for instance, are specified 18 inches above the floor, switches 48 inches above the floor, and wall fixtures approximately 66 inches above the floor.

To save time and to make sure that all the outlets are mounted at the specified heights, a good little trick is to mark a stick of wood with these outlet heights for use as a ruler.

The stick should be long enough for the highest outlet so that it can be used throughout the entire installation. A simple tool like this takes little time to prepare, but can be a big help to the wireman.

Be careful to install outlet boxes and switch boxes properly in relation to the wall surface. According to the National Electrical Code, outlet or switch boxes installed in concrete, tile, or other noncombustible material, must not be set back more than ¼-inch from the finished surface.

In wall or ceilings of wood or other combustible material, they must be set flush with the finished surface.

To make sure that the boxes are set according to these rules, check with the other trades as to exactly what type of wall finish will be used. Modern construction methods include many kinds of wallboards and finishes with many variations of thicknesses

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which must be known in order to set the boxes properly.

Vertical run supports

In long vertical runs of conduit, conductors can be supported in pull boxes. Follow the rules of the National Electrical Code as quoted below:

Section 3014

"The following methods of supporting cables are recommended:

"(a) By clamping devices constructed of or employing insulating wedges inserted in the ends of the conduits. With cables having varnished cambric or thermoplastic insulation, it may also be necessary to clamp the conductor.

"(b) By inserting boxes at the required intervals in which insulating supports are installed and secured in a satisfactory manner to withstand the weight of the conductors attached thereto, the boxes being provided with covers.

"(c) In junction boxes, by deflecting the cables not less than 90 degrees and carrying them horizontally to a distance not less than twice the diameter of the cable, the cables being carried on two or more insulating supports, and additionally secured thereto by tie wires if desired."

The National Electrical Code specifies the following maximum distance that wires can be run vertically without support in raceways:

18 to 0	100 ft.
2/0 to 4/0	80 ft.
250 MCM to 350 MCM	60 ft.
350 MCM to 500 MCM	50 ft.
500 MCM to 750 MCM	40 ft.
750 MCM and above	35 ft.

Hints on wire pulling

Quite frequently, pulling in wires requires more strength than can be applied by hand or with a pair of pliers. Extra leverage can be gained by wrapping the free end of the "snake" around the body, holding it with one hand, and pulling away from the conduit. This will make the job easier.

When several conductors have to be fed into a conduit, they should be kept parallel and straight, and free from kinks and bends. Wires that are permitted to cross each other form a bulge that makes pulling very difficult, especially around bends, saddles, or offsets.

Wherever possible, the conductors should be fed downward so that the weight of the wires will help rather than retard.

Wires are generally fed from reels in large installations, but in smaller installations the wires are laid out on the floor. If necessary, the electrician should have a helper to keep them straight and parallel.

When wire is pulled with a "snake," rope, or other means, it must be firmly attached.

Where several wires are to be pulled together through a long or difficult run, the conductors should be firmly soldered together and the "snake" carefully taped at the point of attachment so that the over-all diameter is not increased any more than is absolutely necessary.

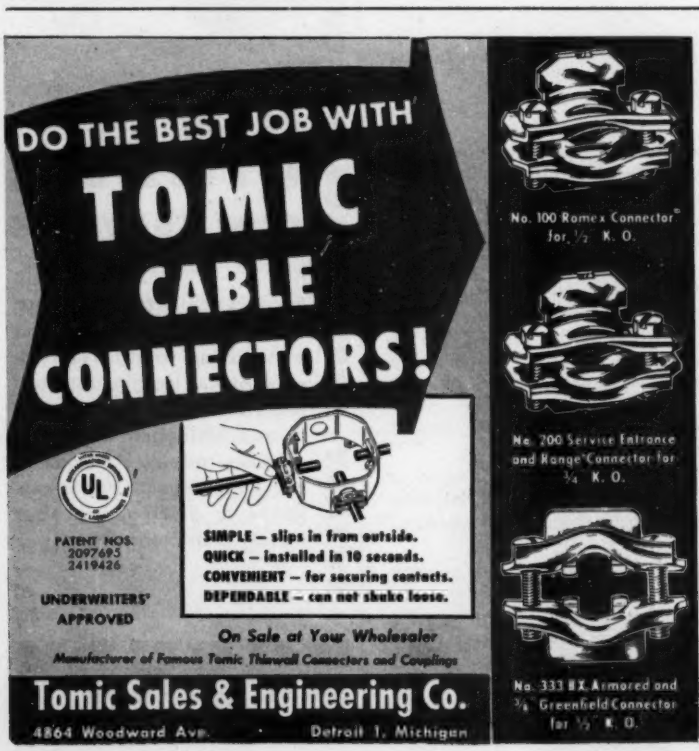
Where several large-sized wires are to be pulled at one time, the connections should be staggered so that they will pull easier through bends.

Staggering is done by attaching one wire to the "snake" and then attaching the second wire a short distance behind this to the bare copper conductor of the first wire. The third wire is, in turn, attached to the second wire, etc.

Basket grips which hold the conductors firmly to the "snake" are also available. They save the time and trouble of taping the wires.

Conductors should be lubricated to make pulling in easier. The proper material to use is either soapstone or talcum. It should be rubbed on the wires before inserting them in the conduit, and some should also be put into the conduit itself.

A practical method of getting talcum or soapstone into the conduit is to scoop the lubricant from the box with a conduit elbow a size or two smaller than the conduit which is installed.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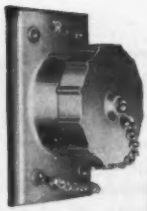
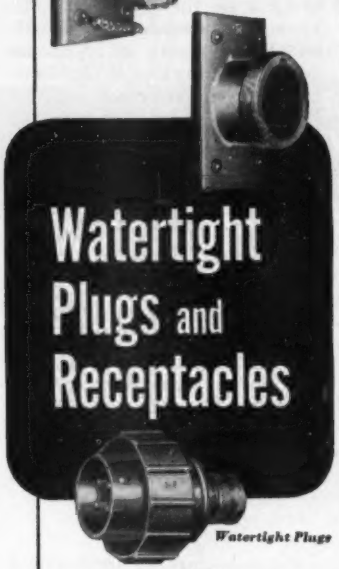


Receptacles for FS-FD Pylet bodies



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One end of the elbow should then be inserted into the conduit and the other end should be used to blow the soapstone or talcum into the conduit. This method will prevent the soapstone from scattering over the floor or over the wireman's clothes.

Oil, grease, and soap should never be used as a lubricant for wire pulling. They injure the insulation on the conductors.

For long runs of heavy feeders it is often necessary to use wire reels. The job can be made easier by mounting the reels properly. Conductors that are to be installed downward are best fed off the top of the reel.

Where conductors are to be fed upward, the best method is to feed from the bottom of the reel. This eliminates sharp kinks or bends in the conductors.

Wire reels should never be laid on their sides so that the wire pays out over the flange because each turn off the reel will put a twist into the wire.

(The third and concluding article of this series will appear in the January issue of ELECTRICAL SOUTH.)

Fixture displays

(Continued from page 33)

switches, spotlights, floodlights, fluorescent overhead fixtures, etc.

Mr. Thompson is unwilling to compete on an equal footing with chain stores, variety stores, and mail-order houses. He starts where the department store leaves off by concentrating on individual styles in fixtures, lamps, and appliances. This appeals to most customers.

For example, there are no low-priced floor or table lamps in stock. Located at one side of the showroom is a large replacement shade department. This department permits customers to choose custom shades for the bases they have selected. There is no attempt to sell shade and base as a unit.

Prices of every lamp shown are uniformly above those of competing department stores and other retail outlets. But Thompson Electric guarantees the individuality of the lamp. They also back up their guarantee with a

NEW STONCO "Cushion-Seal" LAMP HOLDER

for EXTRA LAMP LIFE with ANY LAMP in ANY WEATHER

Adds hours to lamp life by ending your worst lamp headaches. All-weather seal fits *all* lamps—long or short, PAR-38 or R-40—assures maximum lamp cooling and faster heat dissipation. Cushion-Seal includes high-temperature silicone rubber with pressed asbestos sheet barrier and aluminum sheet lock. Weatherproof cast aluminum throughout.

100,000 CANDLEPOWER for only 300 WATTS

Stonco Super Spot No. 56 is the most powerful 300W sealed-beam spotlight ever made. Long-range, oval-shaped beam can be rotated to exact fixed position desired. Available with all standard mountings. Weatherproof cast aluminum throughout.

STONCO ISLAND AREA LIGHT

Porcelain-enamel, heavy steel reflector with built-in cast aluminum bonnet already tapped for 1 to 5 lamp holders — no accessories needed. Removable cast aluminum front cover plate and hollow double-arm yoke saves an hour's wiring time per unit. Write Stonco Electric Products Co., 485 Henry Street, Elizabeth 4, New Jersey.

STONCO

fine service program, which any housewife is bound to appreciate. The same is true, of course, of electrical appliances.

Because of the size and unusual background of their store, Thompson Electric is sometimes mistaken as a wholesaler. This impression is quickly corrected. Sales people point out that the organization does not give discounts of any sort on retail prices. They also explain that the stock offered is sold on the same basis as that of any department store or furniture store.

Exceptions to this policy are contractors building large housing developments. They depend upon Thompson Electric Company for all of the overhead lighting fixtures and often for the lamps as well.

Lighting fixtures are definitely big business at Thompson Electric—both from the builder's and the individual customer's standpoints. Approximately half the space in the retail showroom is allotted to fixture display. More than 50 lighting fixtures are displayed on the ceiling.

Details of fixture display

Mr. Thompson has developed a clever system of hanging the fixtures so that each one can be displayed to maximum advantage. Porcelain outlets, with plug-in sockets, are located on 20-inch centers over the entire showroom ceiling. A heavy brass hook, screwed into the same cross-member as the socket, is only 4 inches away.

With this system, it is possible to hang any lighting fixture from the hook, on 16-inch galvanized wire, so that fixtures are suspended evenly 2 feet from the ceiling. Individual cords for each of the lighting fixtures are taped along the galvanized wire which supports the fixture, and plugged into the outlet a few inches from the hook.

Individual pull-chains are provided at every outlet. The customer who wants to see a particular fixture in use pulls the cord suspended from it. There is no switching them all on or off, such as is often done. Attention can be directed to any single fixture.

When a fixture is sold, it is simple to detach it from the hook, pull out the cord, and replace it with another fixture.

The decision to create so large a showroom, 60- by 80-foot, was made because the building is located only a few steps out of the downtown Beaumont shopping district. The building is in an ideal position to compete with the usual outlets for attention.

For this reason, careful planning with eye-appeal in mind went into the new building. The front is plain white, against which the letters "Thompson Electric" are silhouetted. Six large display windows show off merchandise. An extended aluminum awning invites customers. And a setback front eliminates reflected glare.

The showroom serves as both a general office and a sales area. The rest of the building, back 172 feet, is divided into fabrication, parts, contracting offices, and repairs. The second floor is devoted to warehouse space for contracting materials.

All of the shops, stockrooms, and parts rooms are kept as clean and neat as the showroom. Mr. Thompson believes that the customer who comes in to discuss details of wiring a small factory or installing an electrical warning system is bound to be impressed with the firm as a whole. Why not, if the retail showroom through which he passes vies successfully with the smartest department store or electrical specialty shop!

Ceiling prices

(Continued from page 32)

which the elements of cost were most like the contract you propose to perform now. This dollar amount is your ceiling dollar fee and may be added to the current cost of all the elements of cost in the contract.

Cost-plus with limit

The procedure for determining ceiling prices under the cost-plus type of contract having a guaranteed limit, that is, the type of contract in which you establish a lump-sum price but permit the buyer to share in any saving below that price as measured by actual cost plus your fee, is as follows:

(1) Find the highest lump-sum price for the job as required for lump-sum contracts.

(2) Find the fee that you may apply to the elements of cost for this work as permitted under cost-

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Fluorescent Fixtures

Deliver maximum efficiency and economy . . . Low original and maintenance cost . . . More light for the same dollar.

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Southern Representatives:

- C. K. Ramond, 301 Bellaire Drive, New Orleans, La.
- Craig-Owen Co., 736 Georgia Ave., Chattanooga, Tenn.
- Bob Kuzell, 639 Whitehall St., N.W., Atlanta, Ga.

Handbooks of Adequate Wiring

Two valuable booklets available with Electrical South.

"Handbook of Residential Wiring Design" and "Handbook of Farmstead Wiring Design" summarizing the latest authorative information on adequate wiring systems, may be obtained with a three-year subscription to Electrical South at the special price of $2.50 for a limited time. Send name, address, and remittance at once to make sure of getting your copies.

ELECTRICAL SOUTH

806 Peachtree St., N. E. Atlanta 5, Ga.

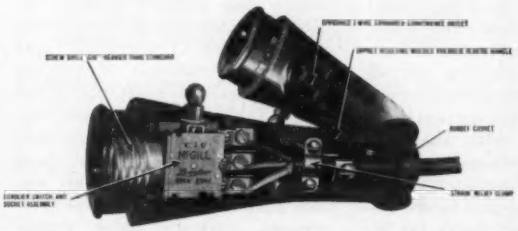
NEW *completely* grounded *portable lighting*

McGILL 5000-G series 3-WIRE Portable Lamp Guards

Now you can have completely grounded portable lighting that complies with all Underwriters' Laboratories requirements for 3 wire grounded electrical systems in so many modern plants. In addition the new McGill 5000-G Series Lamp Guards offer industry the first fully grounded portable with an Approved 3 wire convenience outlet. This provides a connection for drills, saws or other power tools quickly at the working area — without extra extension cords.

The 5025-SLRG model has an impact resisting molded phenolic handle that is positively insulated. It is equipped with a lensed cage for illuminating otherwise inaccessible areas, a built in LEVOLIER switch and 16-3SJT red thermoplastic cord and plug. Available without cord and with closed end cage as 5000-SG.

Select a suitable model at your electrical wholesalers or write for descriptive literature today.



Available from your electrical wholesaler

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American Blower Utility Set. Built in 12 sizes, capacities from 517 to 17,925 cfm at ⅛" SP.

QUALITY SELLS

Quality of workmanship, performance, price and ease of installation—these are the factors that account for the strong popularity of American Blower Utility Sets.

These Utility Sets are ideal for general ventilation where duct systems are required. They can be used as supply or exhaust fans and are available as standard packaged units ready for immediate installation.

It will pay you—both in higher profits and reputation-wise—to sell the complete line of American Blower Ventilating Equipment.

Ask the nearest American Blower Branch Office for data.

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CANADIAN SIROCCO COMPANY, LTD., WINDSOR, ONTARIO

Division of American Radiator & Standard Sanitary corporation

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AMERICAN BLOWER

Air Handling Equipment

Model C Ventura Attic Fans—Built in capacities up to 21,500 cfm for either vertical or horizontal operation. Low power consumption, quiet-operating.

Aeropel Kitchen Fan—Exhausts kitchen heat, smoke and smell. Keeps kitchens fresh. Winner of two Fine Arts Awards for beauty and utility in the home.

Model A Ventura Fans—Smartly styled. No exposed wiring. Smooth, easy-to-clean surfaces. Built in capacities from 1000 to 9700 cfm, free delivery. 12 sizes.

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CHRISTMAS
AND A HEARTY
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WESTERN TENN.

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This
SWIVEL U-BOLT
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is designed to do just that...

No Removable Parts
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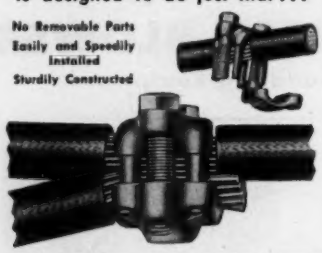

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For More Details, Sizes and Prices
WRITE FOR CATALOG 5LC

K&H KRUEGER & HUDEPOHL
Solderless Terminal Lugs and Connectors
CINCINNATI, OHIO

plus contracts.

(3) Apply this fee to the current cost of all cost elements in this contract.

(4) Add this amount to the total current cost for the job. If this resulting price is not higher than your ceiling lump-sum price as determined in (1) above, it is your contract price.

Time-and-materials basis

For the contractor who makes sales based on an hourly charge for labor alone or for labor plus separate charges for materials, materials installed or expended, or equipment used as needed for that service, there are provisions in the order setting out the methods by which he will determine his separate ceiling prices for the labor charges, for material charges, for use of construction equipment belonging to the contractor, and for the use of equipment rented or leased by the contractor.

If you perform construction services on such a basis, you determine the ceiling prices for labor charges by finding the highest base period hourly charge which you made to a buyer of the same class for each kind of labor in the same construction service; next you find the base period hourly cost to you of each such kind of labor and this cost must be established for the same payroll period as the hourly charge and must include the hourly wage rate paid by you plus the applicable payroll cost per hour. This base period hourly cost is subtracted from the current hourly cost to you of each kind of labor, including payroll costs, the result being the increase in labor costs for the current period as compared with the base period. This increase may be added to the highest base period hourly charge and this figure becomes your ceiling charge for labor.

The net effect of this calculation is such as to permit you to add to the highest hourly charge made during the base period the increases which you have experienced in labor and payroll costs under current conditions as compared to the base period conditions.

Ceiling prices for the material charges are calculated by finding the highest base period percentage mark-up over the cost of material of the same category for a buyer of the same class. This mark-up must be separated into percentage profit and percentage overhead. The percentage profit must be diminished by 10 per cent. The revised profit mark-up added to the overhead percentage gives you your revised total mark-up. From this revised total mark-up and the current cost of the material, you determine your ceiling charge for the material.

Ceiling charges for the use of construction equipment are determined by finding the highest base period hourly charge for an item of construction equipment of the same kind for a buyer of the same class. This highest base period hourly charge may be increased in the ratio which the base period replacement cost bears to the current replacement cost of the item of equipment.

For example, if your base period charge for the use of a certain piece of equipment was $5 a day and this equipment had a base period replacement cost of $1,000 and a current replacement cost of $1,100, your ceiling charge for the use of that item of construction equipment under Regulation 93 would be $5 X (1,100 / 1,000) or $5.50 per day.

The method of determining ceiling prices for use of equipment that is rented depends upon the base period practice of the contractor in charging for rental, operating costs, overhead, and profit. Two methods of making this calculation are outlined in the order. The net result of these calculations is to permit the contractor to charge his highest base period percentage mark-up except that that portion of the percentage mark-up which represents profit must be reduced by 10 per cent.

There are some instances where construction work and materials are handled on what is called an "installed basis." This includes sales of an item of material or equipment, together with installation service, billed to the buyer as a single charge.

Three different methods are outlined in CPR 93 for the calculation of ceiling prices for sales of this nature. The net result of all three methods is to permit increases that may have occurred since the base period in the cost of materials and labor but to reduce the profit mark-up percentage by 10 per cent.

If for any reason the contractor finds that he is unable to price by the methods outlined, he may apply to OPS for approval of his proposed ceiling prices, including in his application certain basic information set forth in the order. The same is true of new sellers who did not do the same kind of work during the base period.

Where such special application is made, however, you must file this application before selling construction services under this ceiling price regulation and you may not sell these services until 20 days after mailing the application or until receiving written approval from OPS, whichever is earlier.

Of course, if you have established a ceiling price under CPR 34 for these construction services, you may continue to sell at these prices until the waiting periods have elapsed or until OPS has established a ceiling price.

Records required by law

As in the case of other ceiling price regulations, CPR 93 requires you to prepare and keep for the life of the Defense Production Act of 1950 and for two years thereafter the following records:

(1) All records necessary to determine whether you have figured your ceiling prices, mark-ups, fees, rates, and charges correctly.

(2) All records showing the cost to you of labor, materials, equipment, rental, sub-contractors' charges, and other expenses incurred by you in connection with your sale of any construction service during your base period and after the effective date of this regulation.

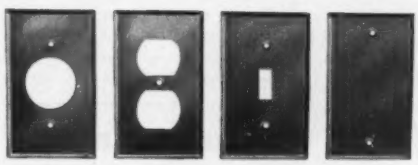
(3) All records showing the charges you made or the prices you offered in connection with your sale of any construction service during your base period and after the effective date of this regulation.

(4) All records, reports, applications, and petitions pertaining to your sale of construction services under GCPR, CPR 34, and under this regulation.

(5) All written contracts for sales of your construction services and all written bids which you submitted in connection with your sale of any construction service during your base period and after the effective date of this regulation.

In addition, if you sell construction services under lump-sum and cost-plus contracts, you must prepare and keep for each type of construction service which you sell under such contracts after the effective date of the regulation a summary of the information contained in the records required to be prepared and preserved. A

STAINLESS STEEL WALL PLATES
FOR SPECIFICATION WORK



Handsome, permanent, brushed satin finish blends with any type of wall decoration for LASTING BEAUTY.

Immediate delivery from stock!

1 to 10 gangs in any combination of plate openings.

10 or more gangs on special order, including tandem.

Sold through wholesalers only.

Write today for catalog!

PERFECT-LINE
Manufacturing Corp.
Hicksville, L. I. New York

WIRING DEVICES · LIGHTING EQUIPMENT · VENTILATING FANS

DIXISTEEL-QUALITY...HOT-DIP
GALVANIZING

FOR CASTINGS • FABRICATED PARTS
PIPE • BARS • STRIPS • TANKS
Up to 24 x 3 x 3 feet *

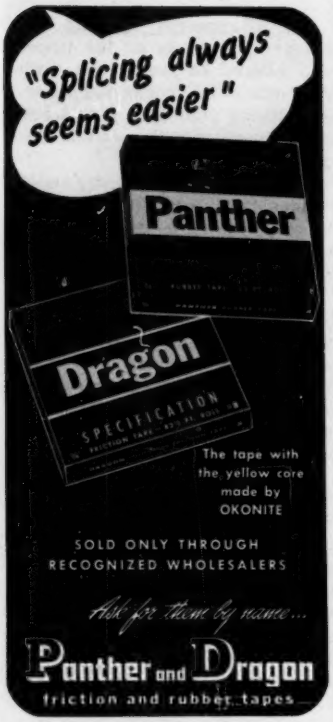
YOUR parts or products can have the same high-quality, hot-dip galvanizing used on our own DIXISTEEL products. Small, tight spangles . . . smooth, uniformly-heavy coats of zinc . . . no fins. A tough, rust-proof finish that withstands severe bends without cracking or flaking.

Write today for quotations on this superior service. Give full details of materials, including dimensions.

*Single dip size. Larger sizes by double-dipping.

If it's exposed to corrosion...Galvanize it!

Atlantic Steel Company
MAKERS OF DIXISTEEL SINCE 1901
ATLANTA, GEORGIA



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931-V

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1819

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Atlanta 3, Georgia

suggested form for this summary is shown in Figure 1.

There are certain prescribed reports which must be made to your OPS office if you sell a construction service based on a time and material, hourly rate charge. Also, a special report must be filed with your OPS office if you sell an item of material or equipment on an installed sale basis if the sale is made at a price which includes the cost of the item, plus a mark-up over cost which was figured to include your estimated installation cost, your overhead expenses, and your profit. Copies of the necessary forms for these reports to OPS may be obtained from any OPS regional or district office.

For reporting your ceiling prices on construction services sold on a time and material, hourly rate basis, OPS has provided Form No. 101 which is illustrated here in Figure 2. This form has four sections providing spaces for showing ceiling charges for labor, materials, rented construction equipment, and company-owned construction equipment.

After you have operated under ceiling prices filed on Form No. 101, you may file a supplemental report on Form No. 102 if it becomes necessary to increase your ceiling hourly rate because of increased labor costs. This form is illustrated in Figure 3.

A report on OPS Public Form No. 103 is required to report ceiling prices on installed sales basis. If it becomes necessary for you to increase your installed sales price as filed on Form No. 103, you must prepare a supplemental report on Form No. 104.

This description of Ceiling Price Regulation 93 is necessarily incomplete since the order itself occupies 11 pages of fine print. It should serve the purpose, however, of giving the electrical contractor a general idea of the scope of this regulation and how it operates. The order has been tailored to fit the construction industry and provides the electrical contractor with a means of revising his ceiling prices upward to take care of increased labor and materials costs.

Every contractor should write his nearest OPS office for a copy of Ceiling Price Regulation 93, a copy of OPS Trade Guide explaining CPR 93, and a supply of the forms upon which ceiling price reports must be filed. (If you do not know the address of your nearest OPS office, an inquiry for this information addressed to the editor of ELECTRICAL SOUTH will bring you this information promptly.)

Direct factory salesman wanted for SOUTH CAROLINA, GEORGIA, FLORIDA, ALABAMA and TENNESSEE by Union Insulating Company, Box 351, Parkersburg, West Virginia, who are manufacturers of:

- **A complete line of Weatherproof Sockets**
- **Pin Type Sockets and Streamers**
- **Insulated Conduit Bushings**
- **Insulated Outlet and Switch Boxes & Covers**
- **Lampholders and Fixtures**

Experience preferred but not necessary

Manufacturer's Representative

calling on electrical jobbers, dealers, engineers and architects — State of Florida — desires additional non-competitive items. Now warehousing and selling a nationally known make of fans (all types) and electric motors.

Address — Box #654
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806 Peachtree St., N.E., Atlanta 5, Ga.

CORROSION ENGINEERS

Corrosion Engineers with minimum of three or four years experience in corrosion investigations and design of cathodic protection on pipe lines and lead cables in country and city networks. Must be graduate electrical engineer (or equivalent.) Work involves extensive travel, with headquarters in New York City. Only applicants with above qualifications will be considered. Give full details of education and experience, and references, in application. Box 656, Electrical South, 806 Peachtree St., N.E., Atlanta 5, Georgia.

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If it's fluorescent
MAKE IT SLIMLINE
STA-BRITE FLUORESCENT MFG. CO.
325 NW 22nd Lane, Miami, Fla.

ELECTRICAL SOUTH

Appliance Section

Household and Commercial Appliances • Radio • Television

TOP HONORS IN THE SOUTH—This window display with other washing machine promotion won first prize for Joske Bros., San Antonio, Tex., in a manufacturer's national contest. Foley Bros., of Houston, took first prize for large-city dealers. Promotion featured a consumer contest.

IN THIS ISSUE:

How we sell the farmers **82**

Sales stem from service **88**

Canvass specific groups **93**

Dominion
TRADE MARK
APPLIANCES

INCREASINGLY POPULAR

MODEL 1011 IRON—(Illustrated above.) Reduces ironing time and effort — 20% larger ironing surface. Cord is reversible for left-hand or right-hand use. **Immediate replacement by dealer** — no waiting, no charge — with brand new iron if defective within guarantee — is real sales feature. Makes a prized gift for that special occasion.

MODEL 1601 COFFEE MAKER — Handsome to look at — a pleasure to use. Automatic flavor regulator—9-cup capacity.

MODEL 2101 DEEP FRYER —Styling and performance unexcelled — at a price that attracts new business.

The steady upward sales curve through thirty years is convincing. Not only at Christmas but throughout the year more people are buying Dominion Appliances.

It takes no fancy formulas to figure the answer — simply that millions of users have found what they're looking for — dependable, good-looking appliances — at the right price.

Dominion Appliances rate with the best — yet sell for less. Available through reputable distributors across the nation.

HOUSEWARES SHOW — Navy Pier, Chicago — January 17-24, 1952. See the complete line of Dominion household appliances — Family Favorites.

DOMINION ELECTRIC CORPORATION • MANSFIELD, OHIO

New ZENITH "FRINGE-LOCK" CONTROL CIRCUIT

New Zenith Invention Brings World's Finest Fringe Area Picture

See the picture at left above? That's fringe area reception on ordinary TV. Vertical "wobble" and horizontal "roll" are caused by ordinary fringe area interference. New Zenith "Fringe Lock" Control Circuit blocks out interference, concentrates on picture signal alone, gives you far better picture shown at right.

Only Zenith has it!

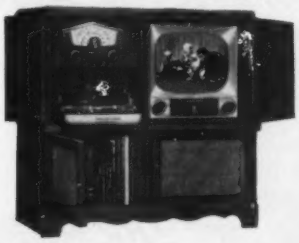
Sells television's toughest customers *on sight!* Means faster, easier sales, more profits for *You!*

They're television's toughest customers . . . the folks who live in remote "fringe areas." But show them Zenith's remarkable new Distance-Reception, and, brother, you've made yourself a whole stack of sales!

It's Zenith's new "Fringe Lock" Control Circuit in action . . . bringing the finest fringe area picture in television! What's more, this sensational Zenith invention teams up with Zenith's "Electronex" Tube, Custom-Tuned Miracle Turret Tuner . . . and with long-famous Zenith built-in quality . . . to sell *all* your prospects quickly and *keep* them sold! You get *more* sales, *more* satisfied customers, *less* dissipation of your profits through costly customer complaints and "call back" servicing.

Check your Zenith Distributor now about these three new 1952 models. See them. Demonstrate them. They'll prove to you beyond a doubt that—in fringe area and TV center alike—Zenith sales are easier sales. Zenith profits are profits you can keep!

1952 Zenith "Galsworthy" Console. 18th Century motif in Mahogany veneers and hardwoods. 17-inch Electronex Tube for world's finest "full-focus" picture. New Dust-Proof Picture Screen. Model J2042R



1952 Zenith "Kipling" TV-Radio-Phonograph —17-in. "Electronex" Tube. Cobra-Matic Record Player, Super-Sensitive FM and Long Distance AM. Mahogany solids and veneers. Model J2868R

1952 Zenith "Fielding" Table Model. A sales sensation! Mahogany Pyroxylin. 17-inch "Electronex" Tube. Also in Blonde Model J2030R

ZENITH RADIO and TELEVISION — THE ROYALTY OF RADIO AND TELEVISION

ZENITH RADIO CORPORATION • *Chicago 39, Illinois*

Here's Why the Nation's

Hotpoint is NOW the

Proved advantages made available to aggressive quality dealers through the Hotpoint franchise reflect the far-sighted business philosophy by which Hotpoint has grown to leadership!

• **HOTPOINT FULL-LINE LEADERSHIP.** Successful dealers are aware of the seasonal peaks and valleys in individual appliance sales, therefore recognize the need for a full line to make every month a selling month. With Hotpoint you have a

full line of appliances, some of which are in popular demand *every month of the year*—a high plateau of year 'round selling which produces steady, sustained year 'round profits. Furthermore, during the past five years, a whole new concept has entered the appliance marketing picture. Today's modern homemakers want *complete all-electric kitchens and home laundries*, not just one or two electric appliances. The trend is well established. Hotpoint's full line allows you to capitalize on this trend.

Hotpoint pioneered the electric range, electric water heater and automatic dishwasher. Hotpoint also produces and aggressively promotes the finest

automatic washers and dryers, rotary ironers, food waste disposers, food freezers, and matching metal cabinets.

The wisdom of Hotpoint's early development of a full line for the all-electric home is demonstrated by the fact that other manufacturers are *only now* beginning to make an effort to expand their facilities to fill out their line.

Hotpoint ... The Foremost Franchise

RANGES • REFRIGERATORS • DISHWASHERS • DISPOSALLS® • WATER HEATERS • FOOD FREEZERS

Foremost Dealers say...

Industry's FOREMOST FRANCHISE!

• HOTPOINT LEADS IN THE PROMOTION OF LOW-SATURATION APPLIANCES. The future of any appliance dealership lies in the active promotion

of today's low-saturation appliance. With every wired home a prospect, Hotpoint provides its dealers with a completely developed sales program on Automatic Electric Dishwashers, Automatic Clothes Washers and Dryers, Water Heaters, Food Freezers, Rotary Ironers and Food-Waste Disposers to penetrate this low-saturation field. In the not too distant future, those appliances which comprise today's list of low-saturation products will become as much in demand as today's refrigerator. And Hotpoint is taking the lead in bringing about this transition.

• HOTPOINT'S FULL-LINE FRANCHISE

provides one source of supply with which to cash in on the trend to all-electric kitchens and automatic home laundries and one source of service responsibility. Hotpoint franchised dealers have the advantage of preferential service, simplified credit, streamlined inventories and full value from Hotpoint's advantising and year 'round retail merchandising. Hotpoint dealerships are discriminately appointed to adequately serve every market. And Hotpoint realizes that the company's success is directly bound to that of the dealer. Weigh the many advantages enjoyed by Hotpoint Franchised Dealers, then talk with your Hotpoint distributor to get the full story. There may be a Hotpoint Full-Line Franchise open in your area.

Before you sign any franchise, you owe it to yourself to review Hotpoint's franchise program for 1952. Have your Hotpoint distributor present it to you.

in the Industry!

AUTOMATIC WASHERS • CLOTHES DRYERS • ROTARY IRONERS • CABINETS

HOTPOINT, Inc. *(A General Electric Affiliate)*
5600 West Taylor St., Chicago 44, Illinois

(Additional items will be found on pages 11, 13 and 75)

2004—Air Conditioning Equipment. New Bulletin No. 3158-B, "Central Air Conditioning Equipment," contains comprehensive information on this type of equipment along with charts, specifications, and maintenance instructions. The bulletin has been released by Buffalo Forge Co., P. O. Box 985, Buffalo 5, N. Y.

2010—Water Heaters. An illustrated folder describing Bell Water Heaters and the ten-year guarantee and warranty is available from Adacar Mfg. Co., Napier Field, Dothan, Ala.

2012—Room and Unit Heaters. Electromode Corp., 45 Crouch St., Rochester 3, N. Y., has announced two new catalogs, each of which contains descriptions, complete specifications, illustrations of the units, and shows typical installations, as well as other helpful information concerning heating by electricity. Catalog EC-62 is the industrial catalog, and No. EC-63 is the domestic catalog.

2014—Hot Water Heaters. Informative and well-illustrated data are available from M. M. Hedges Manufacturing Co., Inc., Chattanooga, Tenn., on their line of Mertland Automatic water heaters.

2018—Electric Fans. A 28-page, profusely illustrated booklet describes in complete detail, this company's line of fans. Booklet available from Emerson Electric Manufacturing Co., 81st and Florissant Ave., St. Louis 21, Mo.

2022—Window and Attic Fans. A four-page catalog piece completely illustrated and containing descriptive information on the new low cost "all in one package" window and attic fans has just been released by the Viking Air Conditioning Corp., 5601 Walworth Ave., Cleveland 2, Ohio. Illustrations of automatic ceiling shutter and automatic electric timer are included.

2024—Electric Water Heaters. New specification sheets are now available for a full line of cylinder and table top models, featuring the Water Hotter, from the White Products Corp., Middleville, Mich.

2028—Fans. Catalogs Nos. 863 and 864, just issued by Chelsea Fan & Blower Co., Inc., 639 South Ave., Plainfield, N. J., include descriptive copy, specifications, dimensions, photographs, etc., of a full line of fans for residential, commercial, and industrial uses. These catalogs include information on 17 types of ventilating and comfort cooling equipment varying in size from 12 inches to 60 inches.

2030—Electric Fans & Drills. Signal's complete line is shown in a new catalog just off the press, featuring a wide variety of desk, pedestal, exhaust, and vent fans. Literature on drills, telegraphic equipment, and motors is also available from the Signal Electric Mfg. Co., Menominee, Mich.

2034—Electric Flat Irons. Full information on American Beauty Electric Flat Irons in a weight, a shape, a size for household, as well as every industrial and manufacturing use, is available in literature from the American Electrical Heater Company, 6110 Case Ave., Detroit 2, Mich.

2038—Murray Ventilating Fans. A set of specification sheets is available describing the Murray line of fans, including 20 and 24 inch window fans and vertical and horizontal ventilating fans. H. C. Biglin Co., Inc., 177 Harris St., NW, Atlanta 3, Ga., is exclusive sales agent for the line which is manufactured by Murray Co. of Texas, Inc.

2040—Electric Blowers and Exhausters. Bulletin 3014-D describes Types "E" and "RE" Buffalo blowers and exhausters, manufactured by Buffalo Forge Co., P. O. Box 985, Buffalo 5, N. Y. Characteristics of the blowers, graphs, charts including capacities and static pressure, and exact dimensions are all contained in the 8-page folder.

2046—Household Electrical Appliances. Dominion Electric Corp., 120 Elm St., Mansfield, Ohio, offers catalog information and detailed specifications on a complete line of table appliances, called "Family Favorites."

2056—Radiant Heaters. Edwin L. Wiegand Co., 7500 Thomas Blvd., Pittsburgh 8, Pa., has prepared a portfolio of Chromalox Radiant Heat Application Reports. In addition, the portfolio includes catalog sheets and technical data on the Chromalox "RAD" heaters.

2058—Exhaust Fans. A new Emerson-Electric Exhaust Fan catalog, illustrating and describing in detail this line of fans for all types of buildings, is offered by the Emerson Electric Mfg. Co., 81st and Florissant Ave., St. Louis 21, Mo.

2064—Electric Fans. An attractive 12-page Catalog of Zephair fans has been made available by the Hunter Fan & Venti-

ELECTRICAL SOUTH
806 Peachtree St., NE
Atlanta 5, Ga.

December, 1951

Gentlemen:

Please send me the bulletins and catalogs indicated.

(Print Plainly)

Name..... **Title**.....

Company.....

Address.....

City & State.....

Circle numbers below. Bulletins and catalogs will be mailed promptly.

2004	2010	2012	2014	2018
2022	2024	2028	2030	2034
2038	2049	2046	2056	2058
2064	2066	2070	2072	2078
2088	2090	2092	2102	2104
2106	2108	2110	2112	2114
2116	2118	2122	2124	2132
2134	2136	2138	2140	2142
3144	2146	2150		

lating Co., P. O. Box 2858, Memphis 2, Tenn. A comprehensive description of this company's products is given, with complete specifications and dimensions.

2066—Shutters & Dampers. A 12-page catalog (No. 46) is available from the Elgo Shutter Mfg. Co., 2738 W. Warren Ave., Detroit 8, Mich., describing the 17 different types of shutter and dampers manufactured by them, and as used in connection with ventilating and air-conditioning installations.

2070—Zephair Fans. Hunter Fan and Ventilating Co., Inc., 400 So. Front St., Memphis, Tenn., offers a new 8-page catalog containing detailed information on the Hunter Zephair Fans, for home and industry.

2072—Reed Unit-Fans. Two new 8 page booklets on unit-fans have been published by Reed Unit-Fans, Inc., 1001 St. Charles Ave., New Orleans 8, La. Material included in these booklets covers design, accessories and installation of the Reed window and attic fans respectively.

2078—Sales Helps. A variety of sales helps, including Sound Slide Colored Training Films, How to Sell Booklets, Consumer Pieces, Specification Sheets, Demonstration Kits, Display Cards and Promotion Kits for selling and demonstrating General Mills Home Appliances—Pressure Quick Saucepan, Tru-Heat Iron and Steam Ironing Attachments are available to dealers from General Mills, Inc., Home Appliance Dept., 1620 Central Ave., Minneapolis 13, Minn.

2088—Air Circulators. Vornado's complete line presented in a four page, three color catalog sheet (Form 9060) includes a wide variety of desk, pedestal, tabletop turnabout, and turnabout window fans. Also available is a descriptive folder on Vornado's new turnabout casement window fan (Form 9082). The O. A. Sutton Corporation, 1812 West Second St., Wichita, Kansas.

2090—Fan Blade & Baffle Outfit. An illustrated catalog page describing their Knock Down Fan Blade & Baffle Outfit has been announced as available from S. J. Stewart (Electric), 527-31 St. Joseph St., New Orleans 12, La.

2092—Air Circulators and Window Fans—The Complete Line of Kisco Floor Model Air Circulators and Portable Window Fans for 1951 is illustrated and described in a series of two-color catalog sheets and envelope stuffers available to the trade. A Special Sales Manual containing product and sales information is available for use by Dealers handling Kisco Products. Kisco Company, Inc., 2400 Dekalb St., St. Louis, Mo.

2102—Marquette Gas Ranges. Five beautiful models covering the entire desires of any housewife featured in color and with individual specifications and catalog pages may be secured from Marquette Appliances, Inc., 307 East Hennepin, Minneapolis, Minnesota.

2104—Marquette Home Laundry Equipment,—Includes Washers, Dryers, and Ironers. For well-illustrated catalog pages that bring out the features and selling points of this popular priced laundry equipment write to Marquette Appliances, Inc., 307 E. Hennepin, Minneapolis, Minnesota.

2106—Fan and Centrifugal Blowers. Catalog No. 513-B. Vital specifications Fresh-Air Maker Fans-Hy Duty Centrifugal Blowers. Attic, Portable, Window, Exhaust fans. Single and double inlet blowers. Ventilating Division-Schwitzer-Cummins Co., 1125 Mass. ve., Indianapolis, Indiana.

2108—Household Refrigerators, Farm and Home Freezers, Electric Ranges. Complete information regarding Coolerator space-saver "motor on the back" refrigerators, a revolutionary new combination freezer-refrigerator and automatic seven heat push-A-Button electric ranges. Write Coolerator, Duluth 1, Minnesota.

2110—Select-A-Range. Landers, Frary & Clark, New Britain, Conn. Eight page folder giving full information on Universal's revolutionary new Select-A-Range with the Convenience Level Oven. Illustrates various parts of range; six Royal Barry Wills kitchens and tells how to install it.

2112—Oil Heaters. An elaborate colorful 16 page catalog, entitled "Nescontrol Heating" describing and illustrating the complete Nesco line of Fuel Oil Heaters and Kerosene Heaters, is available from the National Enameling and Stamping Company, 270 N. 12th St., Milwaukee 1, Wis.

2114—Electric Heataires. A new, colorful, twelve-page booklet from Markel Electric Products, Inc., 145 Seneca St., Buffalo, N. Y., unveils a complete line of wall-attachable, well-recessed, and portable heaters. Heetaire models for every room in the house and other applications are described.

2116—Replacement Heating Units—For electric water heaters. Information on the complete line of various wattages, voltages, and shapes of water heater units of the Immersion Type can be obtained by writing to Tuttle & Kift, Inc., 825 N. Monitor Ave., Chicago 39, Illinois.

2118—Electric Fans—Robbins & Myers, Inc., Springfield, Ohio offers an atractive, 12-page illustrated catalog covering outstanding features, design details, and performance ratings of R & M domestic, commercial and industrial fans for 1951.

2122—Surface Heating Units—For electric ranges. Complete information on fitting the famous TK Monotube Electric Range surface heating units into all types of electric ranges can be obtained by requesting the replacement manual from Tuttle & Kift, Inc., 1825 N. Monitor Ave., Chicago 39, Illinois.

2124—Evaporative Air Coolers—Home and commercial. Essick Manufacturing Company, 1950 Santa Fe Avenue, Los Angeles 21, California, offers its complete line of eighteen models, ranging from 1500 CFM one room fan type coolers to 12,500 CFM, industrial building coolers. Featured this year is the Revolutionary "Pour-In" type, completely self contained washed air room cooler. Write for further information.

2132—Industrial Fans. Circulators & Devices announces the publication of their new, up-to-date 1951 catalog illustrating their complete line of ventilating equipment, including Pedestal, Wall & Ceiling fans, Attic Fans, Exhaust Fans, new reversible window fans, blowers, shutters, etc. Write to Circulators & Devices, 128-168-32nd Street, Dept. S. B. Brooklyn 32, New York, for your free copy.

2134—HANDYHOT QUALITY APPLIANCES—6-page catalog listing 24 HANDYHOT Electrical ppliances and 3 accessories just off the press. (May be folded and used as a dealer-mailing piece by distributors).

2136—HANDYHOT CONSUMER MAILER—"HOME IS A PLEASURE"—9-page catalog of appliances and fans giving "tips" for using in copy. (Makes an effective dealer mailing piece. The "kiddies" enjoy the cartoon type drawings).

2138—"FAN MAIL"—4-page mailer showing "HANDY BREEZE" fans, window ventilators and circulators. Has one full page of "tips" on how to use fans effectively throughout the home. (ideal dealer-mailer).

2140—Ventilating Equipment Circulators & Devices announces the publication of their new, up-to-date 1951 catalog illustrating their complete line of ventilating equipment including Pedestal, Wall and Ceiling fans, Exhaust Fans, new reversible window fans, blowers, shutters, etc. Write to Circulators & Devices, 98-168-32nd Street, Dept. E. S. Brooklyn 32, New York, for your free copy.

2142—Gas and Electric Water Heaters. Two bulletins, in color, devoted to Jackson automatic gas and electric water heaters, have been announced by W. L. Jacnson Mfg. Co., Inc., P. O. Box 26, Chattanooga 1, Tenn. Table-top and round electric heaters, as well as floor furnaces, are described in one; Jackson's 20- and 30-gallon gas heaters in the other. Warranties on both gas and electric models are explained.

2144—Ventilating Products. The complete line of Schwitzer-Cummins Ventilating Products are described and illustrated in a new condensed catalog. Included are attic, window, cabinet, portable and exhaust fans and single and double inlet blowers. Copies are available from Schwitzer Cummins Co., 1125 Massachusetts Ave., Indianapolis 7, Ind.

2146—Repair Parts. "Repair Parts for all Traffic Appliances" is the title of a 46-page catalog available from Pearsol Appliance Co., 2010 Commerce St. Dallas, Texas. This supply parts catalog, No. D-49, has been prepared for dealers as a parts and service manual, and lists all popular repair parts for all traffic appliances (electrical housewares).

2150—Apartment-Size Electric Range. Complete specifications on the State Pride apartment-size electric range, manufactured by State Stove & Mfg. Co., 509 — 25th Ave., No., Nashville, Tenn., are contained in a new two-color catalog sheet. The stove is illustrated, and many consumer advantages are listed.

AD NO. 4 IN A NEW SERIES

Thor* distributors

Get Acquainted With Your Thor Distributor Executives!

Got a problem? If it concerns modern appliance merchandising—put your problem up to your Thor distributor. He's in business to help you win *more business!*

Whether it's how to attract more store traffic . . . how to discover more leads . . . how to turn prospects into buyers . . . or any of the many-sided aspects of advertising, merchandising, or sales and service . . . your Thor distributor can be depended on to give you the right answer!

Shown below are ten of the Thor distributors who serve our dealers in the Southern Division. Get to know *your* Thor distributor better . . . and get to know *better* sales and profits!

Southern Division

MR. S. A. GASSAWAY
Orgill Brothers & Company
10 West Calhoun
Memphis, Tennessee

MR. CHARLES R. REW, JR.
Sales Manager
Alabama Appliance Co.
1st Ave. North & 13th St.
Birmingham, Alabama

MR. C. L. LANNIN
Sales Manager
Carolina Appliance Company
P. O. Box 1997
Charlotte 1, North Carolina

MR. D. M. GILTINAN, JR.
Eskew, Smith & Cannon
Brooks at Smith St.
Charleston, West Virginia

MR. E. H. HOOKS
Sales Manager
Commonwealth Sales Corp.
1601 Summit Avenue
Richmond 20, Virginia

MR. A. G. RIDDICK
C. T. Patterson Company, Inc.
800 South Peters St.
New Orleans 7, Louisiana

MR. GLEN J. WILDER
Sales Manager
Pensacola Hardware Company
20-24 East Gregory St.
Pensacola, Florida

M. J. F. GREENAWALT
Sales Manager
Electric Sales & Applin., Inc.
1550 N. E. 2nd Avenue
Miami 32, Florida

MR. E. H. WILLIFORD
Sales Manager
Carolina Sales Corporation
1420 Evans St.
Greenville, North Carolina

MR. L. L. DAVIS
Moore-Handley Hardware Co.
492 Craighead St.
Nashville, Tennessee

*REG. U. S. PAT. OFF.

are the best in America!

Profit With the Help of Your *Thor* Distributor's Salesman!

What's new? If you want to keep up with what's new in washer selling—ask the man who knows: your Thor distributor's salesman. He'll help you keep up with the latest ideas in washer merchandising—he'll help you keep ahead of your competition. He'll help you keep ahead in *sales!*

Test his "what's new" score! Try the following quiz on your Thor salesman, next time he calls. Score 25 points for each correct answer. And if he doesn't score 100, we'll give you a beautiful new Parker "51" Pen and Pencil Set—absolutely FREE! Please use coupon below.

Try this quiz! Win a new PARKER "51" pen and pencil set!

QUESTION	SCORE
1. Why is the Thor Franchise the most valuable in the Laundry Appliance Industry?	☐
2. How can my distributor's salesman help me get a new Franchise?	☐
3. Why does proper store and product identification play such an important part in the Thor Franchise?	☐
4. How can I build my business during the Holiday Season?	☐

I'm betting that your Thor salesman will score 100% on the above quiz! And *you* can bet on him to help you attract more traffic onto your sales floor—with demonstrations that hold traffic—with sales ideas that powerfully influence buying decisions in your favor. Try this quiz on your Thor salesman—he'll thank you for the test!

Bob

M. R. (BOB) WILSON
General Sales Manager

M. R. WILSON, General Sales Manager
Thor Corporation, Chicago 50, Illinois

☐ I WIN! SEND ME NEW PARKER "51" PEN AND PENCIL SET.

My Name .....
Firm Name .....
Street .....
City ..... Zone ..... State .....
My Thor distributor's salesman's name is .....

Thor CORPORATION, Chicago 50, Illinois

My profits come faster when I sell

CHROMALOX

SUPREME

"2-units-in-1"

RANGE UNITS

IT'S A FACT

CHROMALOX Sells Better

Homemakers through the years have known and preferred Chromalox Surface Units for new ranges and for replacement. Alert dealers *know* this preference leads to quicker, easier, more profitable range unit replacement business.

With CHROMALOX "Supreme" Units

YOU fit all range openings

YOU operate on low-cost inventory

YOU get quick turnover and profits

Write today and see how you can get this profitable, range-unit replacement business in your community . . . and through it build sales for appliances in your store.

OVERALL HEAT

When it's needed!

OUTER COIL HEAT

For uniform, economical cooking in large utensils and frying pans.

INNER HOT-SPOT

Saves up to 45% of the electricity used in small pans and percolators.

EASIEST CLEANING

Unit lifts up, pan comes out for thorough washing.

plus—

- ECONOMICAL COOKING
- COOLER COOKING
- LONG SERVICE LIFE

GET THE FACTS—SEND FOR

"Bulletin RU-149" for your Service Dept.

"THE SWITCH IS ON" for your range salesmen

CHROMALOX

Electric Cooking at its Best!

EDWIN L. WIEGAND CO., 7600 THOMAS BLVD., PITTSBURGH 8, PA.

C. B. Rogers, 1000 Peachtree St., Atlanta, Ga.; L. R. Ward Co., 2711 Commerce St., Dallas 1, Texas; 932 M & M Bldg., Houston 2, Texas; 1511 Louisiana St. New Orleans 15, La.; 1819 So. Boston St., Tulsa 5, Okla.; W. R. Phillips, P. O. box 2561, Raleigh, N. C.; W. R. Phillips Jr., 3125 Lamb Ave., Richmond 22, Va.

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In the accompanying pages are the descriptions of scores of useful catalogs, application information booklets, and technical publications. These are available without charge.

Check over the list of publications available, circle the numbers of the ones you need, and mail the coupon to us with your name, title, company and address plainly written. We will tell each manufacturer to send directly to you the information you want.

●

The staff of ELECTRICAL SOUTH will be glad to help you with other problems. They will obtain expert advice for you on both technical and business problems. The services of a number of consultants are available. Whether your problem relates to sales promotion, lighting or wiring layouts, applications of the National Electric Code, or equipment application, it will receive careful attention.

●

Address your requests to:

Reader Service
ELECTRICAL SOUTH
806 Peachtree St., NE
Atlanta 5, Ga.

On the Appliance Front

INDUSTRY NEWS BRIEFS — GOVERNMENT REGULATIONS

First half of 1952 critical period

◆ THE PERIOD OF greatest stringency in raw material supplies is expected in the first half of 1952. The National Production Authority has told consumer durable goods producers how growing shortages may be expected to affect production in the first quarter.

Producers of less essential civilian items, such as toys and cigarette lighters, will receive only 10 per cent of pre-Korean usage of copper and 20 per cent of aluminum.

Producers of civilian items of a more necessary functional nature will receive up to 35 per cent of their base period use of copper and aluminum. Steel allotments will average about 50 per cent of base period usage for most producers.

These allotments reflect NPA's decision not to ban the production of certain civilian items outright, but to allow for the production of these items even at a very low level until more aluminum and steel are available. It is anticipated that shortages of critical metals should begin to ease by the third quarter of 1952.

Excise taxes extended to other appliances

◆ THE NEW TAX LAW enacted recently contains changes in the excise taxes on electric, gas, and oil appliances. The 10 per cent excise tax now applies to electric belt-driven fans, electric exhaust blowers, electric or gas clothes driers, electric door chimes, electric dehumidifiers, electric dishwashers, electric floor polishers and waxers, electric food choppers and grinders, electric hedge trimmers, electric ice cream freezers, electric mangles, electric motion or still picture projectors, electric pants pressers, electric garbage disposal units, and power lawn mowers.

The excise tax has been removed from electric heating pads but still applies to electric blankets and has been added to electric sheets and spreads.

OPS sets up rule on handling excise tax

◆ THE ADDITION of excise taxes to certain appliances and the removal of excise taxes on certain other appliances will affect the pricing of appliances under OPS regulations. At the present time, it appears that if a dealer has been taking a mark-up on the excise taxes, he may continue to do so on the new taxes. However, if a dealer has been passing the excise tax on to the retailer without mark-up on the tax itself, he will be required to continue this practice in the future with respect to the new excise taxes as well as those that have been continued.

Also, it would appear that in the case of excise taxes that have been discontinued, the retail prices must be changed also. If the retail price included a mark-up on the excise tax itself, the retail price must be reduced by the tax plus the mark-up on the tax.

TV freeze scheduled for early lifting

◆ THE OUTLOOK FOR additional television stations has improved with the announcement that the Federal Communications Commission may remove its freeze on TV licenses about February 1, 1952. The FCC plans to allow about 60 days after the freeze is removed for new applications so that all may have an equal chance at the available channels.

The proposed new channel assignments take into consideration present and future needs with an estimated 2,000 TV outlets available from the very high frequency and ultra high frequency bands.

Shortages of critical materials will probably limit the number of new stations for a time, but many applicants are reported to already have TV transmitting equipment on hand, waiting for FCC licensing.

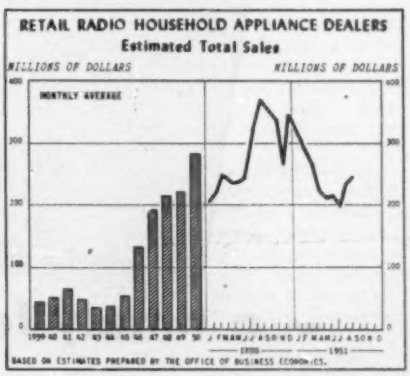
Color TV banned by NPA for "duration"

◆ THE MANUFACTURE OF color television sets for general sale, as well as color attachments for black-and-white television sets designed solely to permit or facilitate reception of color television, has been prohibited in an order issued by the National Production Authority. This has followed from the necessity of deferring mass production of color receivers and adapters because of the shortage of basic materials.

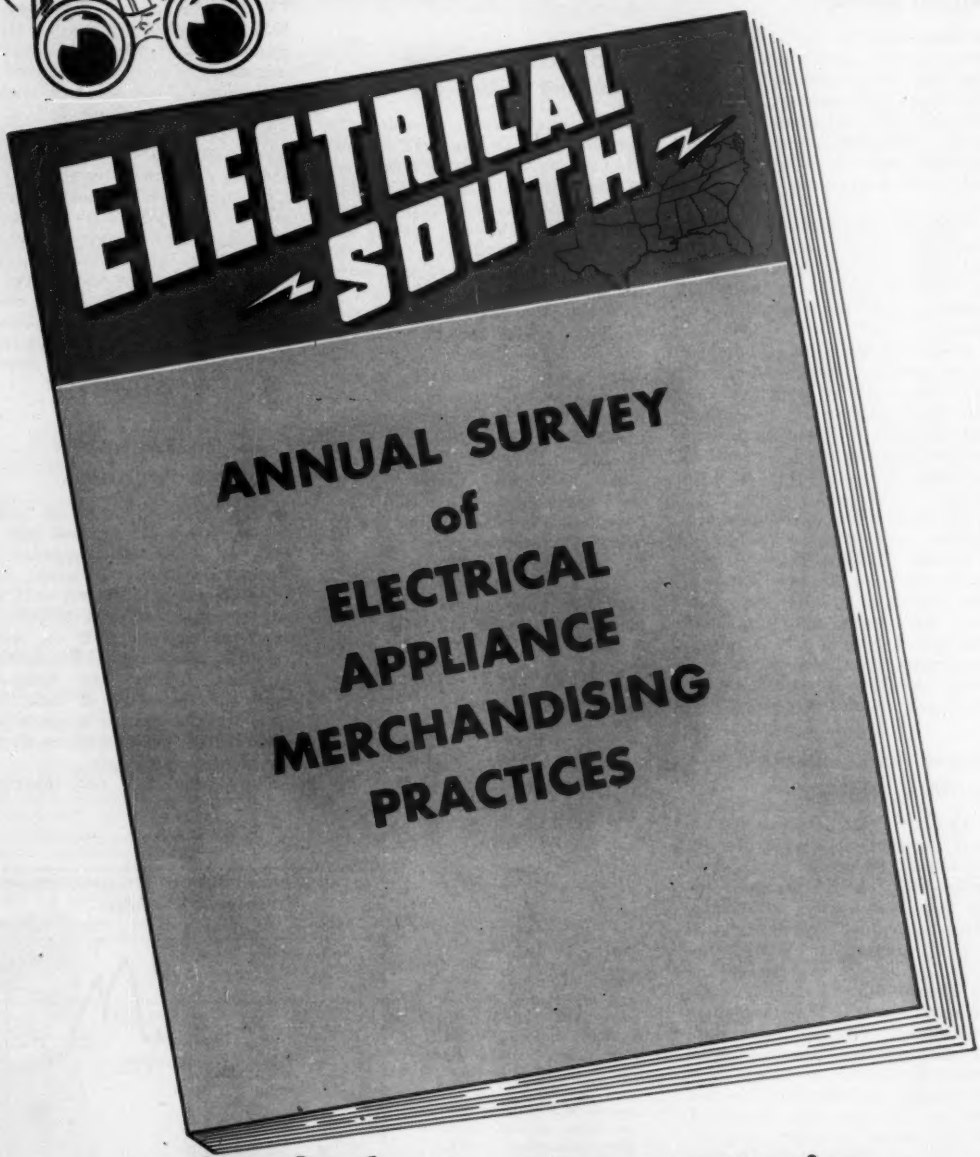
The order will not interfere

Sales trend —

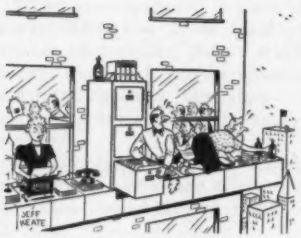
Sales of retail radio and appliance dealers were estimated at 245 million dollars during September, 1951, by the U. S. Office of Business Economics, an increase of 9 million dollars from August, 1951. The September, 1951, sales were 112 million dollars less than sales reported for September, 1950.



LOOK AHEAD . . .
PLAN AHEAD . . .
Coming in MARCH 1952 -



-- a timely feature presentation



"Boy, will I be glad when this outfit finds more office space!"

with research and test programs in connection with the further development of color television systems or with the manufacture of color television equipment for defense, industrial, and educational uses.

Manufacturers CPR's are now mandatory

◆ CEILING PRICE REGULATIONS affecting manufacturers have been amended to provide for mandatory effective dates.

Amendment 33 to CPR 22—the General Manufacturers' Order, and Amendment 20 to CPR 30—Machinery Order, name December 19, 1951, as the mandatory effective date for these regulations.

Supplementary regulations to CPR 22 and CPR 30 have also been issued which provide for optional adjustment of ceilings under the so - called Capehart Amendment to the Defense Production Act of 1950.

Appliance promotions to continue in 1952

◆ ADVERTISING and promotion programs of the Electric Range, Electric Water Heater, and Farm and Home Freezer Sections of the National Electrical Manufacturers Association have been approved for 1952, according to action taken at fall meetings of the three sections, it was announced at the annual meeting of the association at Atlantic City.

In formulating plans for the continuation of activities at the architect and builder, home economist, school management, plumber, and dealer levels, the sections felt that, even though production of major electric appliances faced an uncertain future, these programs should be carried on.

This "indirect" approach to the consumer, begun many years ago, results in essential education in the advantages of electric appliances, the sections believe, rendering those who come into direct contact with consumers, better equipped and informed to serve them.

RTMA acts to improve TV service practices

◆ A THREE-WAY educational and information program designed to provide more trained technicians to improve service practices in the radio-television industry has been launched by the Radio-Television Manufacturers Association.

The program involves the recommendation of television servicing courses in the approximately 2,500 vocational schools and in as many adult educational schools as possible throughout the country. To further this program, RTMA has engaged the Radio Corporation of America Institute to write a three - year vocational high school course on radio and television and a 10-12 months course for adult educational institutions.

In another project, RTMA is co-operating with the National Better Business Bureau and local bureaus throughout the country in distributing a booklet on care of television receivers. The booklet, entitled "Things You Should Know About the Purchase of Television Sets," is designed to give purchasers of TV sets information on what they may expect of their receivers.

TV code would improve programs

◆ TELEVISION DEALERS will welcome news of the code recently adopted by the National Association of Radio and Television Broadcasters.

"Talk about greed! He tripled my salary, and then asked me to marry him!"

The purpose of the code as stated by the association is to maintain co-operatively a level of television programming which gives full consideration to the educational, informational, cultural, economic, moral, and entertainment needs of the American public, to the end that more and more people will be better served.

Included in the code are provisions that will assure that advertising messages will be presented with courtesy and good taste, that advertising copy will contain no claims intended to disparage competitors, that medical advertising will not include claims using words such as "safe," "without risk," or "harmless" indiscriminately.

The code also includes a number of words and certain subject matter that will not be used. In addition, the code requires that criminality shall be presented as undesirable and unsympathetic and the commission of crime will not be treated in a frivolous, cynical, or callous manner.

(Continued on page 95)

WSB approves year-end bonus

THE WAGE Stabilization Board has adopted an amendment which will aid employers, who did not pay a Christmas or year-end bonus in 1950, or where such bonus was less than $40 per employee.

This amendment permits payment of a Christmas or year-end bonus not to exceed $40 per employee without Board approval, even if no bonus, or a lesser bonus, was paid last year.

If you gave no bonus last year, you can now give up to $40 per man if you want to. If your bonus as computed under the regulation based on last year's history is less than this amount, you can give up to $40 per man *instead of* (but not in addition to) this bonus.

If your bonus computed under the regulation exceeds $40 per man, forget about this amendment.

This amendment applies only to employees under the General Wage Regulations, not to those under Salary Stabilization Regulations.

How we sell the farmer

"The farmer has five times as much need for electric service as the city home" — that means five times as many sales!

by Ross L. Holman

◆ WHEN A NEW REA line strews its illumination over the countryside, all the nearby appliance dealers welcome it as a new source of business. Here is a whole community full of prospects who have never before enjoyed the benefits of pushbutton living.

There is one dealer in Shelbyville, Tenn., who never sits around wishfully hoping for some of this business to spill into his lap. Every time a new area is bathed in electric brilliance, this dealer carries his store right up to the farmer's back door in the form of a demonstration truck with all the kitchenware for which the farmer's wife is waiting.

This rolling store belongs to John C. Huffman, owner of the John C. Huffman Appliance Co.

(Top) W. M. Brandon, left, field salesman for John C. Huffman Appliance Co., Shelbyville, Tenn., has helped Mr. Huffman, right, make the company a leading dealership in his county. (Bottom) In this converted bread van, Brandon carries appliances to prospects for their inspection before REA lines are installed.

When announcement is made of a new REA line to be built in another community, John's truck doesn't even wait for the electric power to become available—he beats the kilowatts into the neighborhood!

This aggressive salesmanship has made his firm one of the top appliance dealerships of Bedford County.

A year or so ago, announcement came through that a new power line would be constructed in a certain area of the county to serve 13 farm homes. Just as soon as the news broke, W. M. Brandon, Huffman's field salesman, jumped into the truck and headed toward the community.

The truck he drove was a rebuilt bread van, remodeled especially to meet John's store-to-customer needs. It contained some refrigerators, washers, and other major appliances bolted down so they would stay put over a bumpy road.

"I drove up to each home to be served," explained Mr. Brandon, "and invited the housewife into the truck to look over the appliances she had been denied these many years. There were the appliances, ready to be plugged in to start washing her clothes, cooking her spinach, and freezing her ice cubes as soon as she spoke the word, signed the contract, and flipped the switch."

To make a short story, when Mr. Brandon wound up at the tail end of the route the new power line was to embrace, he had sold 11 out of the 13 farm homes to be energized. How many of these farm women would have hunted up the Huffman store and bought

(Continued on page 99)

These views show a prospect who has just had her house connected with an REA line. She has been contacted by Brandon, and has come in the store to look at appliances. (Top) Brandon is demonstrating how a power washer takes the place of the scrub-board method. (Center) And of course she wants an electric range. (Bottom) John Huffman makes sure she sees the model refrigerator suited to her needs, while Brandon is preparing a freezer for her to see.

My salesmen make their own appraisals

Texas dealer believes that proper training in preparing a salesman to make his own appraisals also schools him in better selling methods

by William W. Gates

Sales Manager,
Appliance Department,
Calcasieu's
Austin, Texas

♦ IS A SALES FORCE necessary in the successful operation of an appliance department?

I maintain a sales force is essential. But building and maintaining a sales crew requires both time and patience. And, I might add, a new approach.

The majority of us sales managers like to rest on our laurels. In this respect, we try to adjust the present to conform to the past. This would be permissible were we not living in an ever-changing world.

Day by day we are confronted

Appraisal Form

Customer's Name _____ Make _____
Address _____ Model # _____
Phone _____ Year _____
Date Appraised _____ Style _____

Refrigerators	Ranges	Washers
Describe exterior _____	Describe exterior _____	Describe exterior _____
Basic value (See chart) $ _____	Basic value $ _____	Basic value $ _____
Estimated repairs $ _____	Estimated repairs $ _____	Estimated repairs $ _____
Trade-in value $ _____	Trade-in value $ _____	Trade-in value $ _____

Basic Value Chart			
Condition:	Poor	Fair	Good
1930-36	2.00	12.00	20.00
1936-40	4.00	20.00	45.00
1940-42	18.00	26.00	55.00
1946-On	20.00	45.00	75 - 95

Basic Value Chart			
Condition:	Poor	Fair	Good
Hi-oven	0	2.00	5.00
Apt.	5.00	10.00	15.00
Old TT	10.00	15.00	20.00
New TT	20.00	30.00	50 - 65

Basic Value Chart			
Cond.:	Poor	Fair	Good
Before 1946	10.00	20.00	30.00
After 1946	20.00	35.00	40.00

Salesman _____ Accepted _____ Rejected _____
Approved by _____ Comp. Offer _____ By _____

Each salesman is provided with these appraisal forms — how could he go wrong using them?

with new circumstances. Whether we change or not, everything around us is changing, including the salesmen and the prospects with whom we deal.

The successful appliance salesman can no more function today as he did yesterday than he could live on a 1940 income. Today, the appliance salesman must be set up so that he can operate with a minimum of lost time. Time is the factor that determines the salesman's value to himself and the firm he represents.

Back in the good old days—which weren't so good while we were living them—the appliance salesman could waste his time and still make a fair living. At least, many did. Today, every minute counts.

Competition much keener

Appliance selling is becoming a faster and faster game. There is more competition with which to contend. There are not only more appliance dealers, there are many more "names" on the market. And while we like to think the line we handle surpasses all others, it is the fool who does not respect competitive makes.

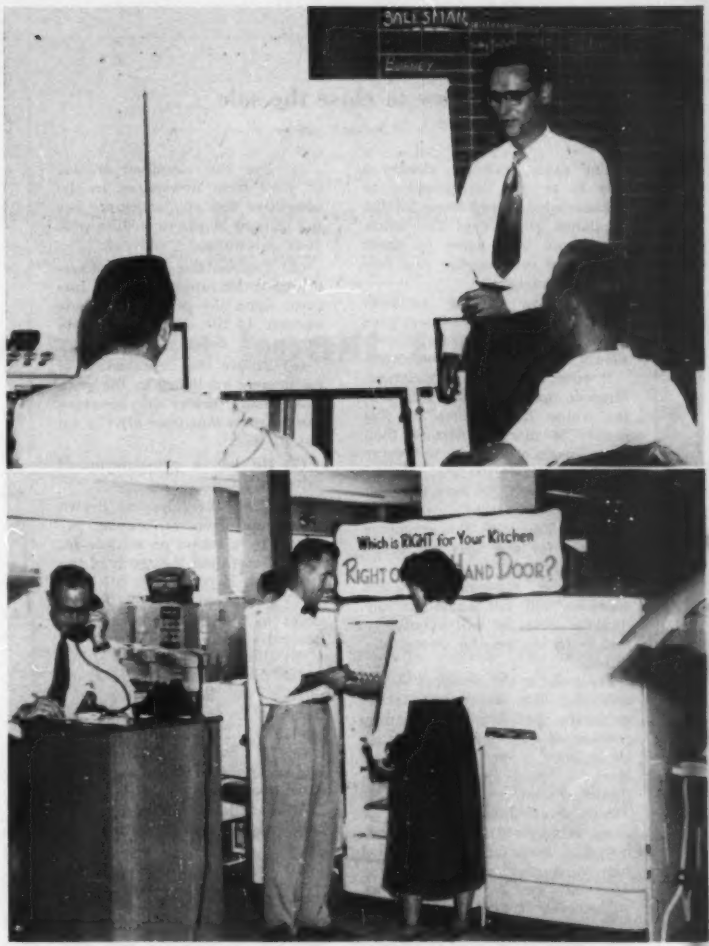
Furthermore, only in remote areas can any one dealer hope to have one line exclusively. Granting that his line is tops in both performance and customer acceptance, the prospect can deal with the dealer of his choice. Narrowed down, it is a fast game. Correct?

The appliance picture has changed. Let's view it from a new perspective.

A few months ago, I adopted a plan whereby my men make all their own appraisals. And it works to everyone's advantage and satisfaction.

It conserves each salesman's time, and is showing us a net saving of 10 per cent on our used-appliance operation.

Why shouldn't salesmen be



(Top) Mr. Gates goes through the appraisal pay-off story before the entire sales force, then with each salesman individually. This routine has to be drilled into each salesman. (Center) After the salesman has learned how to make an appraisal, he can close a deal by himself—make the appraisal on the spot and whisk the prospect to the showroom in his car.

(Bottom) Another advantage in a salesman's making his own appraisal is that he will not have to make a call-back, wasting his and the prospect's time.

How to close the sale

THE BASIC RULE for closing a sale is to get the prospect to acknowledge a preference for the appliance and accept the terms. When you both agree on these two points, closing the sale follows automatically.

First, you should establish whether or not the prospect prefers your appliance. If he doesn't, then further selling is indicated.

If your appliance is preferred, impress upon him the fact that the value he receives for his money is more important than the allowance he hopes to receive for his trade-in.

Be emphatic. Be sure you tell the prospect that he is probably going to live with the appliance he buys for the next ten or 20 years.

A larger allowance for his trade-in will not atone for the dissatisfaction he will eventually feel from buying the wrong appliance.

Point out to the prospect that it will cost him less to own your appliance. Tell him the cash difference, if this holds true, is so slight that it becomes inconsequential when spread over the period of ownership.

Also dwell upon the worth of extra value features, the fact that no other manufacturer can give him as much for less, and the desirable resale and trade-in value your appliance possesses.

Many objections center around the appraisal of the prospect's trade-in. The trade-in value of the prospect's present appliance is the snag in closing the sale. Many prospects would have you believe they are more interested in selling their old appliance than they are in buying a new one.

Generally, the objections to the appraisal, and how to overcome them, are:

(1) The prospect sincerely believes he is not getting enough for his old appliance:

(a) Such prospects are unfamiliar with current used values;

(b) Show the prospect used appliances similar to his that are priced in line with your appraisal;

(c) Use the classified section of your local newspaper as the convincer that appliances are being offered at prices in line with your allowance;

(d) Explain the cost of reconditioning his appliance and impress upon the prospect the advantage to the dealership in offering top dollar for trade-ins;

(e) Figure the depreciation of his present appliance by the year. *These small factors help convince the prospect that your offer is not out of line.*

(2) He has a pre-determined price in mind:

(a) Most likely he has drawn conclusions from an amount received by a friend on a trade-in;

(b) Determine the truth of the statement, if possible;

(c) Point out possible differences in make, model, age, and general condition;

(d) Check the difference between the model of the new appliance and added convenience features in contrast with the model the friend bought.

(3) He has been offered a higher appraisal from a competitive dealer:

(a) Bear in mind that you cannot always believe such a statement;

(b) Find out if the prospect would buy at that price;

(c) Assure the prospect that you are eager and willing to help him buy by assisting him with financing.

(4) The prospect is a born horse-trader and likes to barter:

(a) You should be able to spot this type early in the sale;

(b) The original appraisal should be a little lower than the limit you intend to offer. Then offering to split the difference convinces the bargainer that he really drove a hard bargain;

(c) Don't believe what he tells you about his preference for a competitive make, or the competitor's offer;

(d) Talk money difference;

(e) Talk operation economy;

(f) Stress the higher resale value of your appliance.

schooled to make their own appraisals? Why has this been overlooked for so long?

This practice dates back to a period in the appliance business—at retail level—when so-called appliance salesmen were, in the majority, nothing more than bird dogs and demonstrators for "closers."

The majority of such men could not be trusted out of arm's length. Those men have long since departed from the scene. They outlived their usefulness and are now engaged in some other pursuit that can better utilize their particular talents.

Why, then, bog down the present type appliance salesmen in order to protect ourselves from a menace that no longer exists?

Be assured the type salesmen we want, and must have today, will not tolerate working under conditions which were acceptable a few years back.

When I first mentioned my plan, those to whom I outlined it warned me against it. I was told it would only lead to ruin. But I started down the road to ruin alone—with my salesmen tagging along behind.

Inasmuch as we do a three-quarter-million-dollar appliance volume a year, I was not gambling with pennies. But before I started I pretty well knew what to prepare for.

I reasoned that if my men were properly trained before I turned them loose, I couldn't lose much. But, if I were successful, my gain would more than repay me for the time invested in the training.

Basis for sales training

The training of salesmen today involves co-ordinating the salesmen's thinking with the customers'. The modern housewife doesn't spend much time shopping. Shopping used to be an event. The modern housewife has better use for her time.

She must manage to have time for social and sports activities along with her household duties. When she buys, she wants to get it over with, and on to some other activity. Call backs annoy her as much as they annoy the salesman who must, after building up a desire, pull freight and go for assistance to make the appraisal—and maybe kill the deal with his cold-blooded manner.

Our men, once they have seen the used product, can make the appraisal on the spot and whisk

(Continued on page 101)

Why six regular outside salesmen sell 55 per cent of total volume

Bonus payments boost turnover

by George S. Gardiner
President,
Modern Appliance Company
Baltimore, Md.

In this article, Mr. Gardiner tells how to maintain the enthusiasm of the sales force with special bonus payments on slow-moving stock. In a previous article (October, 1951, issue) he described a method of protection for salesmen's prospect.

◆ SPECIAL PROMOTIONS, giveaways, and large trade-in offers will provide temporary spurts in sales, but we have found it far better to remember that the soundest route to constant turnover lies in the hands of our salesmen.

Good salesmen are the mark of every successful appliance firm. It has been our experience that if the salesman is provided with sufficient incentive, changing from month to month, the chances are that he will work more diligently and produce more business than he would on any special promotion which cuts into profit.

We have six regular outside salesmen, who are responsible for between 50 and 55 per cent of our total volume month after month. The proportion remains the same whether we enjoy a record month, or do a very ordinary business.

The rest of our sales are derived through drop-in traffic at the store, or through newspaper advertising, which brings requests for home demonstrations. First and last, however, the crew of salesmen must be carefully nurtured for the store to maintain its success.

We look at the relationship between store and salesmen on a dollars-and-cents basis. We know that the salesman sticks to his job only because he is satisfied with the income he earns, and because he is pleased with his work.

So whenever we plan a promotion, we see to it that the salesmen's interests are taken into consideration before another step is added.

This is the method by which we have learned that a bonus plan frequently administered will do more to offset sales doldrums than any form of sales management. We use bonuses regularly, to boost sales of slow-moving appliances, on an over-all basis during off seasons, and in other ways.

The special bonus system, whereby the salesman receives an extra commission for selling slow-moving appliances, has proven very valuable. For example, if we have 30 washing machines in stock which for some reason or other did not sell at the expected pace, we will offer all six salesmen a bonus of $10 for every such washer sold over a 30-day period.

While it may be easier for the salesman to sell another more popular model, we have found that the men will dig in, utilize their spare time in finding more prospects, and bring all of their salesmanship in play.

For another example, we found that a $10 bonus, paid on radio-phonograph combinations, helped us to clean out a stock which had slowed down to a standstill because of television competition.

Over another 30-day period, we offered a $10 bonus on the better-priced radio-phonograph combinations, and were surprised to find that we sold them all.

Bonus doubles calls

Also, when we found that a 19-inch-screen television set, which had been expected to sell far better than it did, was filling up our storeroom space, we offered a $25 bonus to each salesman. All of the men doubled the number of calls they made during the month that this promotion was on, and in that space of time, we sold out every 19-inch television set.

Bonuses are by far the simplest method by which the salesman can earn extra income, and certainly they are the most clean-cut method. To make certain that every salesman understands exactly what he is to do, we hold a bonus meeting on the first day of

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SERVICE

Poor service operations can tear down business as fast as good sales promotion and advertising can build it up

Sales stem from service

by H. E. Putnam

Customer Service Manager
Landers Frary and Clark
New Britain, Conn.

♦ To STATE THAT a dealer either gives service or he doesn't is the same as stating that a dealer is either in business or he is on his way out. To sell, the dealer must give service—service and sales go hand in hand.

While all of our national advertising and sales promotion are aimed at the consumer, our direct contact with the consumer is through our dealer, upon whom we are dependent to follow through in functioning for us not only sales-wise but service-wise.

There has been too much emphasis placed on the production and sales of finished goods and too little emphasis placed on customer service at all levels. A poor service operation can tear down business as fast as good sales promotion and advertising can build it up.

This article is adapted from a talk made by Mr. Putnam before the annual conference of the International Association of Electrical Leagues, in New Orleans, October 10-13, 1951.

We, as manufacturers and the distributor, have a job to perform and so has the dealer. We need his co-ordination to complete our service picture.

With the turn of events during the last few months, we have been faced with an over-abundance of appliances rather than the predicted shortage. It has been a buyer's market with inventories in some instances 100 per cent above normal. The dealer has had to learn how to sell.

The alert dealer has combined an aggressive sales campaign with an efficient service operation.

The average factory service man is prone to be super critical of the dealer, because back at the factory he must constantly live with complaints from the consumer on dealer treatment. Of course, product grief is his business.

For this reason, I personally try to read as many reports and articles as possible written from the sales angle or from sources outside the industry to keep my views from becoming warped.

In all of these down-to-earth reports of general conditions at the retail level, it is pointed out in no uncertain terms that inadequate product service is at least one of the prominent causes for the slump in sales with many dealers.

Back in July of this year, *McCall's Magazine* released a study of appliance retailing written by their Albert McNamee entitled "Appliance Retailing in a Mobilization Economy." This report, in plain language, lays the facts on the line.

Poor selling charged

The dealer has been accused of not only poor selling technique but lack of product knowledge and in many areas the entire lack of a customer service operation. The charges are serious but no doubt justified.

To be sure, we are going through an abnormal period and a period of uncertainties. But too many dealers are willing to sit back and lay the blame for low

sales volume on government regulations, high cost of living, too much competition, consumer resistance, and a dozen and one other drawbacks.

To be sure, they are factors, but little or no thought has been given by too many dealers to the fact that inefficient service or the lack of product service has had a hand in keeping their volume at a low ebb—or that a concentrated service effort along with aggressive selling could give them the jump on their competitors.

There may be consumer resistance to finished goods sales but there is never resistance to a good service operation.

Service short comings

Let us go back a few years and review past history. The manufacturer should be somewhat humble about the lack of stress they placed on the importance of appliance servicing. The industry as a whole was not entirely alert to this angle of their business until World War II. I know that the service operation for which I am personally responsible is not without criticism.

Shortly before World War II the industry arrived in an era of highly mechanized, automatic appliances. Previous to this period we were producing only the manually operated electric housewares and semi-automatic major appliances on which service was comparatively easy.

Upon entering this new era, we should have recognized the need for more service education at the dealer level in the appliance industry. But during the war and for two years after, the emphasis was placed on the production of finished goods.

We had a seller's market—the distributor—the dealer—the consumer—were all crying for merchandise with no thought given to product service.

The old adage that "a product is only as good as the service rendered on same" was completely forgotten. Service was just another operation within the industry that had to be tolerated. This was true of most lines of merchandise at that time.

Suddenly the supply met the demand and we all woke up to the fact that we could not sell without service.

Top managements in the industry, recognizing this weakness, took definite action. The service department or the product service division has stepped up into prominence as a very important function within the organization.

And why not, when service is so vital to sales volume. This operation may not show a large paper profit but it can be responsible for that intangible profit so invaluable—the creation of good will with the customer.

The factory sales and service divisions are now working closely together co-ordinating their efforts. Ten years ago they were strangers.

Service streamlined

Just as in the production departments, the operations within the service divisions have been streamlined for efficient handling of customer orders. No one ever dreamed of using assembly line technique in service operations until recent years.

The battle between production and service is over. Service requirements are at last on a par with finished goods requirements. It is not uncommon in these days to have a shut-down on the assembly line so that the needs for service may be met.

Service engineering sections have been developed to edit and publish more complete manuals, parts price lists, parts identification sheets, and technical bulletins—so important to the dealer.

And, in the case of my company

as with many others, there has never been a charge made for such publications regardless of the quantity requested. These service publications are being written so that the man on the street can understand them.

Factory-trained field service representatives are now covering the country, policing service policies, working with distributor and dealer service departments and the authorized service stations for the improvement of service in the field.

Field service meetings are being conducted for dealers under distributor and utility sponsorship. These men are keeping their fingers on the pulse of service in their respective territories, constantly reporting back to the factory.

General correspondence sections have been enlarged to handle service inquiries from the trade or consumer. Complaints and referrals are being handled promptly. Policy and product information is being forwarded with dispatch. These sections act as clearing houses for all service problems.

The chains of authorized service stations for electric housewares and vacuum cleaners have been expanded. More appointments are being made in strategic locations to expedite repairs for the dealer and consumer.

This important function of customer service should not be passed over lightly, for that day is gone when the manufacturer would appoint an authorized service station and then promptly forget about it.

Two types of warranties

In the appliance industry the manufacturer has set up two separate service warranties. They are both pretty much standard procedure with all manufacturers, but I feel they cause confusion even in the minds of some large full-line dealers.

Briefly these service warranties are:

(1) Major appliance service whereby the manufacturer assumes the responsibility for the replacement of defective parts only during the warranty period, and the obligation for the labor involved rests upon the distributor or in turn the dealer. Under most distributor arrangements the labor becomes the dealer's obligation.

(2) Electric housewares and vacuum cleaners whereby the manufacturer assumes the expense of both labor and parts during the warranty period when the work is performed in the factory-authorized service station or the factory service division.

The manufacturer has come a long way towards placing his house in order service-wise. Not only has he installed new methods and new policies but new thinking. This new thinking must be impressed on the distributor, the service station, and the dealer.

It is my prediction—and all signs point that way—that just as we are now featuring the quality, beauty, and convenience of our appliances in national advertising, we will soon be featuring the service which backs up our products. The consumer will be buying with service in mind. It will be good business on their part and we should prepare ourselves for it.

How well is the dealer tying in with these service arrangements as set up by the manufacturer? Is he taking advantage of all that we have to offer him? Is he fulfilling his obligation to the consumer and in doing so building up good will to create future sales volume?

It is my opinion that too few dealers take service seriously. And to refer once more to the *McCall* report let me quote:

> *"In some cities visited, not one retailer of appliances, radio, or TV was capable of making any repairs, even of the simplest nature. In others the percentage was found to be in the neighborhood of 5 per cent, while a percentage of 10 per cent was unusual. Individual retailers were not only content but happy to pass the service responsibility on to another—the utility, a professional servicing company, or the manufacturer. The considerable number who fail to connect the service department with the building of sales and good will is surprising."*

With the arrangements made by manufacturers for the servicing of electric housewares both in- and out-of-warranty, we cannot criticize the dealer for not setting up to make major repairs to such items.

But on major appliances such as ranges, washers, ironers, refrigerators, etc., any dealer who does not conduct his own service operation or at least work closely

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Appliance service in a small town

by Allen Rogers, owner
Rogers Electric Company
Cartersville, Georgia

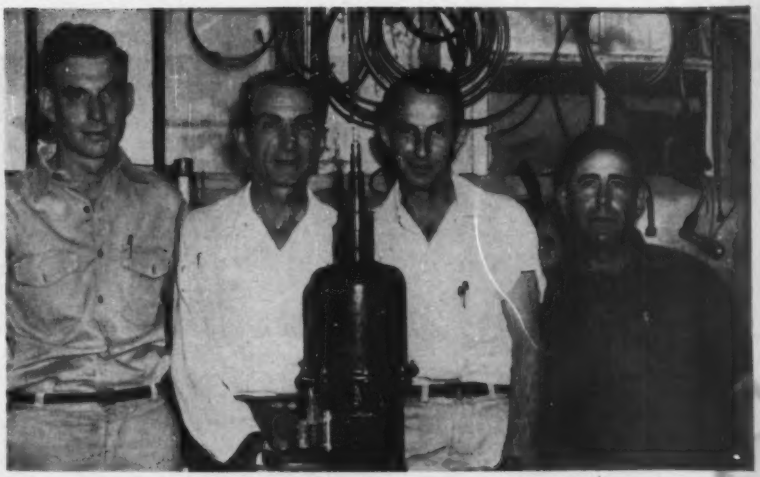
SMALL-TOWN FOLKS have a reputation for moving slowly, but they don't want their repair men to be that way. Repairs account for two-thirds of our business, and I believe our best advertisement is promptness in attending to repairs.

Of course, we often have to postpone our service. In such cases we find customers appreciate a frank explanation. However busy, we can always assure a customer we will at least drop by during the day to see what is wrong.

I keep in touch with the other men so that repair calls can be scheduled from the office. We load a pickup truck each morning with parts and sometimes obtain parts from a furniture store on the way to a job.

We find it wise to take care of "old" customers first. Since we have an arrangement with three furniture stores to install and service appliances, these customers as well as former customers have priority on service.

I am sold on promptness because I have seen a contracting business ruined through giving false promises. The proprietor told customers, "We'll be there right away," when he really should have said, "We'll be there this week—maybe"!



Cliff McMahon, second from left, who operates Cliff McMahon, Electrical Appliances, in Gainesville, Texas, says his three-man service department can do just about anything. For instance, Daryl Wyatt, left, and Hugh Wilson, third from left, are exceptional at selling as well as servicing. Frank Meyer, right, is the third member of the service force.

Servicemen can double as salesmen

Their sales amount to 10 per cent of annual gross volume

by Baron Creager

Rita Popp, bookkeeper with the company, shows how a refrigerator tray holds a small stock of hearing aid batteries, which the company stocks as a customer convenience. (They have to be kept cool in the summer.)

♦ ONCE A YEAR in Gainesville, Texas, service men turn salesmen during the inevitable three-months slack period and help maintain volume in major appliance sales for the firm of Cliff McMahon, Electric Appliances.

McMahon says that over the three-months period, major appliance sales by servicemen amount to 10 per cent of the annual gross volume. In October, McMahon estimated that sales for the year by service men would total $17,-000.

"Our slack period of three months," explains McMahon, "comes along at the end of summer and lasts until Christmas buying begins, just as sure as night follows day."

"It is a slack period with a double effect. Sales are off and so are the demands on our service department.

"So when this slack period descends upon us, two of our service men—Daryl Wyatt and Hugh Wilson—become salesmen for at least one day out of each week. They are each supplied with a truck and they are paid 5 per cent commission above their regular salaries. The results have been extremely satisfactory and this procedure has produced substantial sales volume over a normally critical period."

Except for this one period during the year, the service department is loaded with work and it would be impossible to withdraw service talent from the department, McMahon says. Yet service men are so adept at handling trade-in sales that their services could be used more often.

Where an especially old trade-in is involved, service men are of

(Continued on page 101)

Farm electrical customers--

their buying habits and attitudes toward retailers

◆ WHEN FARM FAMILIES buy electrical equipment—and they buy a lot of it— they go to the retailer who handles their favorite brand, who provides adequate service, and who has a reputation for business integrity. Price and trade-in allowance get only slight consideration.

These and other important factors in farm family purchasing habits are revealed in a joint survey made by the research department of the Curtis Publishing Company for the farm and rural market development committee, National Electrical Manufacturers Association, and *Country Gentleman*, national farm magazine. Electrical household appliances, farm production equipment, and lighting and wiring equipment were covered in the study.

Despite the fact that the 2,000 representative farm families surveyed reported buying substantial amounts of electrical equipment in the last five years, it was evident that the buying impulse generated within the family itself. They said retailers made little or no attempt to solicit their business. They were, however, generally satisfied with the selection carried and the service provided by the dealers patronized.

Farm families not satisfied with their electrical appliance dealer relations suggested that these dealers employ better trained men, make periodic checks of equipment, employ service men, hold demonstrations, operate a better repair service, and send customers information about new production.

Farm production equipment dealers were urged to have a better knowledge of their products, be interested in farm requirements, carry a complete line of parts, do a better servicing job, and make periodic checks of equipment sold.

Dealers of lighting and wiring equipment were given these suggestions: be more prompt in answering service calls, carry more modern equipment and a larger stock, show more interest in the customer, know more about the products carried, and check customers' needs periodically.

More than one-third of the families had made their last major

(Continued on page 104)

We canvass specific groups

Highest percentage of sales made to one type of prospect — the teacher

by Robert A. Latimer

◆ SELECTING A SPECIFIC group of prospects, all of whom are members of the same profession, and in about the same income bracket, is a policy which has sold many appliances for the Alabama Home Supply Company, 206 Dexter Ave., Montgomery, Ala.

"We hit upon this system almost by accident," R. E. Manley, head of the firm, indicated.

"When we first went into outside selling, in July of 1949, our two specialty men were told to free lance. Find their prospects wherever possible, and get their leads from newspaper ad response, customer tips, drop-in prospects, etc.

"While this was reasonably satisfactory," Mr. Manley indicated, "we have since found that there is a lot more to be had from every dollar spent in outside contacts and advertising through concentrating on a specific bracket of prospects."

"The accident" to which Mr. Manley referred happened late in 1950. A tabulation was made of prospect calls and sales made by the two outside salesmen during the preceding year.

In going over the figures, Mr. Manley noticed that they had made the highest percentage of actual sales to one particular type of prospect, the school teacher. More investigation revealed that actually eight out of ten of these prospects who had been contacted by Alabama Home Supply had purchased at least one major appliance, whereas the ratio in general was about one in ten.

In discussing the matter with his salesmen, Mr. Manley found that each man had the same impression of the school teacher.

Since that time, the outside

(Continued on page 102)

These exterior and interior shots of Alabama Home Supply Co., Montgomery, Ala., show an aggressive Christmas promotion in progress. Note the various electrical housewares featured in the front windows as gift items.

News Roundup

Timely items relating to dealers, light and power company sales departments, electrical wholesalers, manufacturers and their agents.

♦ THE ANNUAL Chattanooga Home Show was held recently at the Memorial Auditorium in Chattanooga, Tenn., with 44,000 paid attendance, and featuring outstanding local and national firms and products.

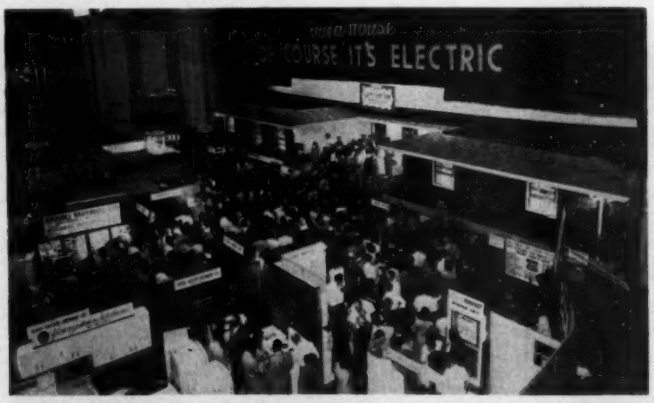
Feature attraction of the show was an all-electric Idea House, a completely furnished and decorated nine-room house constructed on the auditorium stage. The house incorporated electrical ideas such as two all-electric kitchens, electric home laundry, remote-control wiring, General Electric's Light Conditioning Recipes, electric Ceil Heat, electric wall heaters, Hunter attic fan, Marvair heat pump, unique lighting, and miscellaneous electrical appliances.

The house was exquisitely furnished throughout, and landscaped with live grass and shrubs. The floor plan consisted of two kitchens, laundry, breakfast room, living room, dining room combination, den, two baths, and a bedroom.

Idea House was built with the co-operation of the Chattanooga Association of Home Builders and the Electric Power Board of Chattanooga.

♦ SLATER ELECTRIC & Mfg. Co., Inc., Woodside, N. Y., has recently announced the appointment of Stout Electrical Sales Co., 224 George St., Cincinnati, Ohio, to cover the territory of Kentucky, Southern Indiana, and Southwestern Ohio.

♦ TRISTATE ELECTRICAL Supply Co., Inc., 38 So. Potomac St., Hagerstown, Md., with branch offices in Baltimore and Cumberland, has been appointed distributor for Laundry Queen washers in that area. The announcement was made recently by Hodge C. Morgan, vice-president and director of sales at Automatic Washer Co.



Feature attraction of the recent Chattanooga Home Show was the all-electric Idea House. This completely furnished and decorated nine-room house was constructed on the auditorium stage. A paid attendance of 44,000 saw electrical living at its best in the Idea House.

Territory covered by Tristate will include 22 counties in Maryland, 14 in Virginia, three in West Virginia, and two in Delaware.

Robert Stott, president, states that a service department has been set up with Don Maysack as manager.

♦ AMERICAN STOVE Co., St. Louis, announces the appointment of Moore-Handley Hardware Co., Nashville, and Orgill Brothers & Co., Inc., Memphis, as Magic Chef distributors in central and western Tennessee.

Moore-Handley Hardware Company will be responsible for sales and service of Magic Chef gas ranges, and Magic Chef gas and oil space heaters in the Nashville, Clarksville, and Columbia trading areas.

Orgill Brothers & Co., Inc., will be responsible for sales and service of Magic Chef gas ranges in the Memphis, Dyersburg, Jackson, Corinth, Greenwood, Greenville, Clarksville, Columbus, and Tupelo trading areas.

F. C. Galloway, Magic Chef district representative, will work closely with the two new distributors and all Magic Chef dealers throughout the franchised territories, according to K. O. Dupree, Southeastern sales division manager.

♦ THE DIRECTORS of the B. T. Crump Co., Richmond, Va., recently elected the following officers: chairman of the board, P. A. Seaton, Sr.; president, William E. Seaton; and vice-president, O. F. Marston. The board of directors now includes those officers, as well as P. A. Seaton, Jr., Robert H. C. Seaton, and others.

The Crump Company is a well-known manufacturing and distributing firm which will soon begin its 60th year of business in Richmond. It distributes nationally known brands of home appliances, TV and radio sets throughout Virginia and Eastern Carolina.

In the appliance and TV division, P. A. Seaton, Jr., is general manager, H. A. Pohlig is product manager of the Norge line, and A. R. Lower is product manager of TV and other lines.

♦ SIX TERRITORY men and a new field sales manager have been appointed by Dulaney's Inc., of Oklahoma City, Okla., wholesale distributor of International Har-

vester refrigerators and freezers in the Oklahoma City district, the company announced.

Robert Lawyer will handle the Oklahoma City and Tulsa metropolitan markets; R. T. Moore, the northwest section of the territory; Robert Van Cleef the southwest; Eugene Johnson the south central; Robert Burris the southeast; and Frank Endorf the northeast section of the territory.

Jordan B. Reaves, a former territory man for Dulaney's, was appointed field sales manager and will supervise the territory organization.

◆ THE APPOINTMENT of Kenrow, Inc., of Atlanta, Ga., as distributor of Ironrite ironers has been announced by Ironrite general sales manager Hal Biddle, of Mt. Clemens, Mich.

Kenrow, located at 451 Bishop St., N. W., in Atlanta, will cover the state of Georgia, exclusive of the southeastern section, for Ironrite.

Mr. Biddle and W. Frank Smith, of Knoxville, Tenn., regional manager for the Southeast, were in Atlanta recently to make final arrangements with Kenrow president Vance G. Woodcox.

Kenrow also distributes Motorola, Decca, and Smithway water heaters.

TV broadcast code

(Continued from page 81)

The code also includes a provision that the use of horror for its own sake will be eliminated. It does not permit the use of visual or oral effects which would shock or alarm the viewer, nor the detailed presentation of brutality or physical agony by sight or by sound.

Of special interest from the viewer's point of view is the schedule included in the code which limits the amount of advertising time allowable for programs of various lengths. In the case of programs appearing during "Class A" time, a 15-minute program will be limited to 2½ minutes of advertising, while a 60-minute program can have no more than 6 minutes advertising.

The adoption of this code by television broadcasters should undoubtedly contribute much to the pleasure of television set ownership, and react favorably from the TV dealers' point of view.

Silent Salesmen

Westinghouse — Roaster display

A NEW POINT-OF-SALE roaster-oven display is now available to dealers from Westinghouse Electric Appliance Div., Mansfield, Ohio.

The full-color three-piece display, designed to fit compactly around the roaster oven, can be used on counters

and in show windows. Side copy panels point out that the roaster oven "cooks the food, not the cook!" and is "cool outside—300 degrees hotter inside."

An ad-display booklet, accompanying each display package, contains suggestions for using the roaster display to best advantage. It also shows three newspaper advertising mats available for local advertising. The new mats range in size from 280 lines to 420 lines.

Lewyt — Store-within-a-store

THE Lewyt Market Place, a store-within-a-store, available from Lewyt Corp., 60 Broadway, Brooklyn 11, N. Y., equips a dealer to give adequate and immediate demonstrations during the course of a sales talk. It helps him organize his job of selling and also acts as a center for frequent Lewyt promotions.

This Lewyt Market Place will be featured in national magazine advertising for the remainder of the year. Copy will read "Stop at this display for just 10 seconds and let us show you the revolutionary features of the Lewyt vacuum cleaner."

Sturdily constructed of wood and masonite, the display measures 6 feet in height and 5 feet in width, with a depth of 36 inches. The carpet used in demonstrations is permanently attached to the base and spotlights are directed on the Lewyt vacuum cleaner.

The center panel of cartoons showing Lewyt attachments is a lighted shadow box.

International Harvester — Refrigerator-top display

A FULL-COLOR reproduction of a "Rainbow Girl" display piece is available to dealers as a refrigerator-top display from International Harvester Co., 180 No. Michigan Ave., Chicago 1, Ill.

Described as a $4 value, the display sells for $2. Actual colored door-handle inserts fit in slots in the display.

The "Rainbow Girl" theme, introduced by International Harvester, extends to point-of-purchase displays. Removable colored door-handle inserts make the display an excellent dealer merchandising tool.

This makes a merchandising tool which enables the dealer to lift the handle right out of the display for demonstration purposes.

This display is part of a four-way promotion which also features dealer co-operative advertising in newspapers, outdoor posters, and national advertising. "Pick a Color from the Rainbow!" is the key phrase of the campaign.

Names and Faces

William F. Ogden has been appointed manager of product planning in the marketing services division of the **General Electric Co., John L. Busey,** vice-president of marketing, announced recently.

For the past 15 years, Mr. Ogden has been associated with Hotpoint Inc., a General Electric affiliate, where he served as commercial engineer, assistant chief engineer, and manager of products in the marketing organization.

Mr. Ogden originally joined General Electric in 1927, and later that year he joined the Georgia Power Company in Atlanta where he remained until 1936. He is a native of New Orleans.

•

Clayton P. Fisher, Jr., of Schenectady, N. Y., has been appointed manager of materials and purchasing for the **General Electric Co.'s** major appliance division, it has been announced by **Clarence H. Linder,** general manager of the division. Mr. Fisher succeeds **Lee D. Nutter,** who has been transferred to New York City as manager of major appliance sales in the New York district.

Mr. Fisher was formerly with the company's apparatus advertising and sales promotion department in Schenectady as manager of the apparatus exhibit train division. In that capacity he was responsible for the "More Power to America Special," which recently completed a tour of the nation's industrial centers.

•

M. O. Hollis, secretary-treasurer of **Raybro Electric Supplies, Inc.,** Tampa, Jacksonville, Miami, St. Petersburg, and Orlando, recently announced several important personnel changes, which are as follows:

R. L. Pike has been appointed Jacksonville branch supply sales manager. Mr. Pike has been covering a regular territory out of the Jacksonville branch for a number of years.

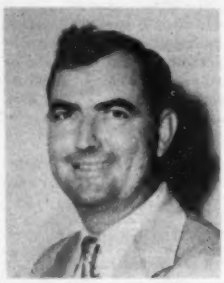
W. C. Winslow has been appointed Jacksonville branch merchandise manager and will be responsible for all merchandise sales in the Jacksonville territory. Mr. Winslow has been with Raybro for a number of years, handling a regular territory on merchandise sales from the Jacksonville branch. He will be replaced in his old territory as promptly as possible.

I. F. Russell has been appointed Miami branch manager and will be in complete charge of all merchandise sales for the Miami branch operation. Mr. Russell has been covering a regular merchandise territory for Raybro

I. F. Russell

out of the Miami branch. He will be replaced in his territory by **Jack Howk,** who has been handling merchandise service for the Miami branch.

Gordon Priday has been appointed St. Petersburg branch manager. Mr. Priday was transferred to the St. Petersburg branch from Jacksonville, where he was branch supply sales manager, and replaces **Paul Roulstone,** who has been transferred to Tampa and appointed Tampa branch supply sales manager.



Paul Roulstone

•

Bill Garrett, formerly advertising and sales promotion manager of Graybar's Houston, Texas, office, is now city **Hotpoint** salesman for the Dallas branch **Graybar** office.

•

Paul M. Augenstein has been appointed manager of sales of the **General Electric Company's** electric sink and cabinet department, it has been announced by **C. J. Enderle,** general manager.

Mr. Augenstein succeeds **Robert B. Beale, Jr.,** who has moved to Cleveland as assistant manager of major appliance sales in the Great Lakes district, and he is succeeded as sales manager of electric ranges by **Howard A. Oliphant.** Mr. Oliphant has been Seattle manager of appliance sales for the past year.

•

Robert E. Boak has been appointed southwestern district sales manager for the **Apex Electrical Mfg. Co.,** according to a recent announcement by **A. C. Scott,** vice-president in charge of sales.

In his new assignment, Mr. Boak will be in charge of distribution in Arkansas, Louisiana, Oklahoma, and Texas, with headquarters in Dallas.

Mr. Boak has been Cleveland district manager for Apex since 1949.

•

Richard H. Schneberger has been appointed general service manager of the **Crosley division of Avco Mfg. Corp.,** as announced recently by W. A. Blees, Avco vice-president and Crosley general sales manager.

Mr. Schneberger comes to Crosley from the Coolerator Corp., where he has been merchandising manager for the past three years.

Mr. Schneberger succeeds **H. A. Newell,** whose resignation to handle newly acquired personal business interests was also announced.

•

Stanley G. Fisher, New Britain, Conn., has been named to direct the sales of the electric housewares division of **Landers, Frary & Clark,** it was announced recently by **Bret C. Neece,** vice-president and general sales manager.

Stanley G. Fisher

Mr. Fisher has been active in several of the company's sales divisions for a number of years and has recently managed the field selling force of the electric housewares division.

•

Roy R. Sampson, Jr., has been appointed salesman for the state of Texas by the **John Oster Mfg. Co.**

Mr. Sampson, a native Texan, was formerly with NESCO, Inc., covering the Arizona, New Mexico, and West Texas territories. He is now making calls on Texas distributors and dealers.

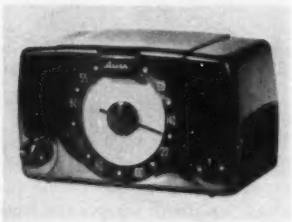
Product Parade

Table radios

A NEW four-tube table radio and the addition of a new set in the five-tube group have been announced by Arvin Industries, Inc., Columbus, Ind.

Priced at $15.95, the new four-tube set, to be known as Model 542T, is styled in an ivory shatterproof cabinet with jet-black control and volume knobs.

The cabinet itself is stamped of one-piece, seamless steel with over-all di-



mensions of 8¼ inches long, 5-5/16 inches high, and 3⅝ inches deep.

The new model in Arvin's five-tube group is the 450T-Jet, a streamlined table set which will carry a retail price tag of $19.95. This model is being specially priced as a promotion item and is offered in a solid jet-black case with contrasting ivory face.

Arvin also announced a reduction in price on their 540T line, the six-color Rainbow Radio line. Originally priced at $18.95, these radios now sell for $16.95.

•

TV control manual

A NEW TV CONTROL replacement manual supplement is now being offered to TV servicemen through Clarostat jobbers. The new supplement is another service offered by Clarostat through its jobbers to aid the serviceman in his service field.

The Clarostat Mfg. Co., Inc., Dover, N. H., manufacturers of controls and resistors, issued a manual last spring listing 343 set listings covering nearly 1500 TV models. 105 standard controls with 5,705 applications and 222 RTV or exact-duplicate controls with 3,451 applications were included.

The new supplement will give a continuation of RTV numbers listing the manufacturer's part that they are used to replace.

The new supplement has been compiled to aid the serviceman in his stocking of controls and also in ordering. It lists by receiver manufacturer the frequency of use of the various controls. Thus the serviceman can carry the stock he needs for his specific territory to service the prevailing makes of receivers.

•

Nesco roaster

A NEW electric roaster to retail at $39.95 has been introduced by Nesco, Inc., 201 N. Michigan Ave., Chicago, Ill., manufacturer of housewares. The new 18-quart unit — "Streamliner Model 118-03" — includes features that will make this a fast-selling model.

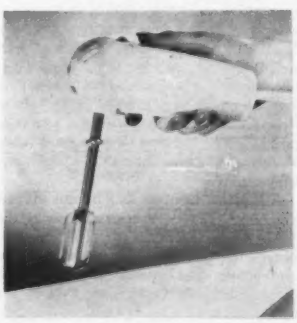
Featured are look-in lid, thermostatic heat control, browning vent, three-piece porcelain pan set, and bake rack.

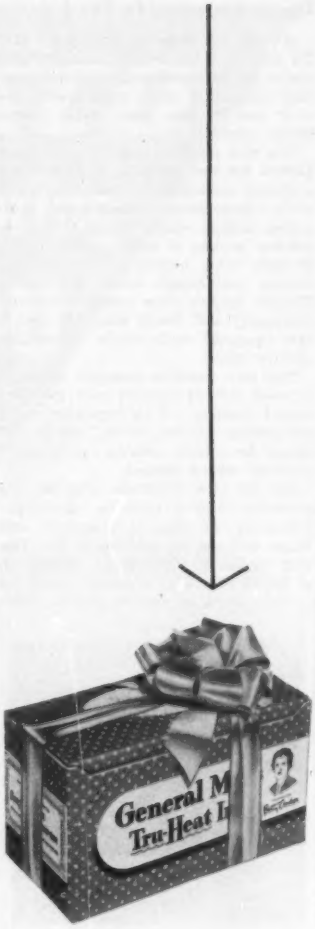
•

Two-beater mixer

TWO NEW FEATURES have been added to the Osterett, a small two-beater mixer manufactured by John Oster Mfg. Co., Racine, Wis. A recent switch to Beetle plastic for the housing has provided a pleasant touch and light weight.

The Osterett is made with a small, powerful motor. It can be held comfortably in one hand. Stain from perspiration and food acids will not discolor it.





All General Mills Home Appliances are packed for Christmas giving in gay red and white polka dot cartons.

Big-screen portable TV

A NEW addition to Motorola's 1952 TV line is a big screen portable television set equipped with a 14-inch picture tube. Five other models with 17-inch and 20-inch tubes were introduced recently.

The new models range in price from $199.95 for the portable to $399.95 for a deluxe mahogany 17-inch television-radio-phonograph combination. All prices include excise taxes. Other receivers include a table model with a 20-inch tube, available in both mahogany and blonde limed oak, and a 20-inch console also available in both mahogany and limed oak. All models are equipped with black rectangular picture tubes.

The new portable receiver comes in a wood cabinet covered with tan simulated leather. It is equipped with Motorola's "Golden Beam" dipole antenna. An outside antenna can be easily attached where desired.

All the new Motorola receivers are available with a built-in ultra-high-frequency all-channel reception and tuner unit for an additional $40. This unit makes it possible to receive all of the 70 new UHF channels called for in the future, as well as existing tele-

vision channels. A UHF all-channel adapter can be purchased as an accessory for $49.95. Installation is simple enough to be done by the average set owner.

An important feature of all new models is an exclusive Motorola "Glare-Guard" process, which eliminates up to 98% of all reflected glare. This anti-reflection is made possible by a specially treated picture tube and an optically curved glass screen which directs reflections downward out of the range of vision.

•

Fan-heater circulator

THE NEW HANDYHOT combination fan-heater circulator has year-round application in the apartment, home, cottage, cabin, office, or trailer. Features include a powerful, quiet, 8-inch fan, two radiant elements set into an attractive, rich warm-gray, radio-type cabinet. Both design and color blend in perfectly with any color scheme or decor in

either home or office. The convex front guard of highly polished grill-work and the non-tip design and always-cool exterior of the cabinet provide a high degree of safety.

Lightweight, compact, with convenient handle for carrying to whatever room needed and non-mar rubber feet to protect furniture when used as a table-top heater are additional features. The convenient, snap-switch has three positions—off, fan, and heat. Heating element is rated 1320 watts; fan rated at 30 watts. Complete details are available from Chicago Electric Mfg. Co., 6333 W. 65th St., Chicago 38, Ill.

•

Sales incentive plan

SALES MANAGERS will find special interest in the merchandise prize sales incentive plan now available through Belnap and Thompson, 1516 So. Wabash Ave., Chicago, Ill., who have just announced availability of their 1952 prize incentive book.

The merchandise incentive program enables any sales organization to stage periodic sales campaigns on a merit point basis, with a wide variety of prizes available for the salesman's own selection. The nature of the prizes are such that the campaigns build family interest, improve employee morale, and enable the salesmen to win awards of greater value than the simple cash value of their prizes at retail.

The 1952 prize book is the largest issued in the company's history. It lists 1,635 brand-name prizes, many illustrated in four colors. The book is in two parts, one part designed to remain effective for 12 months; the other part is an insert containing additional prizes and listing the merit points required for each prize. The merit points also indicate the management's price of the prizes on a basis of one cent per merit point. The inserts are issued every 90 days and thus keep prizes and prices up-to-date.

Although Belnap & Thompson prize incentive books are customarily imprinted in quantities to individual order, complete sample books, without imprinting are available on request from Belnap & Thompson, 1516 S. Wabash Avenue, Chicago, Ill.

Electric polisher

A NEW BEAL Speed Polisher, when attached to a tank- or cannister-type vacuum cleaner, converts them into floor, furniture, and automobile polishers. The polisher can also be used for sanding and grinding.

The Beal Speed Polisher utilizes the stream of air from any standard tank- or cannister-type vacuum cleaner to turn a turbine-type mechanism. It attaches easily and quickly to the vacuum cleaner and takes very little storage space.

The design of the polisher makes it possible to polish in corners and close

to walls. A plastic bumper attachment protects furniture. The polisher has a 7-inch brush with imported Tampico bristles hand-tied with brass wire which will not come out.

The brush is not affected by water, soap, or solvents. The ample weight of the polisher eliminates additional pressure.

The polisher is precision-made of die-cast aluminum and is fully guaranteed against defective materials and workmanship.

•

G. E. automatic washer

A NEW DELUXE fully automatic washing machine has been announced by the General Electric Co., Bridgeport, Conn. The washer incorporates an instant stop and start control, water-saving small load operation, and a lighted interior. An additional four-year warranty has been put on the machine's sealed-in transmission parts.

Operating on the same principles as the company's earlier models, the new washer is a top-loading, free-standing machine with agitator action. Once started, it will automatically wash, double rinse, and spin-dry a load of clothes, and then shut itself off.

To stop and start the washer at any point in the complete washing cycle requires only the use of a simple push-pull switch. Once it is stopped, the machine can be re-started at the exact moment of cycle interruption, or it can be made to repeat or skip any stage within the cycle. Important in the washing of synthetic and woolen fabrics, this new feature also makes it possible to add "forgotten" pieces to the wash load. For further con-

venience and safety, a red indicator light next to the switch signals when the washer is in operation.

The small-load selector permits the homemaker to wash up to five pounds of laundry using only 10 gallons of water in each cycle. At capacity, the tub holds 17 gallons of water and up to nine pounds of dry clothes.

Selling the farmer

(Continued from page 83)

their appliances from him if he had not gone to them first?

That is just one example of how Brandon raced ahead of REA lines all over Bedford's farm areas to get the farm women to refrigerate and do the family wash the Huffman way.

He rolled over another projected route before the kilowatts were wired in and sold four out of the five homes to be reached. On another route he sold six out of nine.

He followed up after the lines were built, and he and another salesman, W. A. Williams, have been chasing REA wires from one end of the trade territory to the other selling additional appliances to the farm homes they have already gotten started as customers.

Before the line is built, the truck still covers every route to be electrified. Mr. Brandon is now selling more from the store than on the outside, waiting on the interested prospects Mr. Williams is stirring up on his REA lines.

In commenting on his REA experiences, Mr. Brandon said, "My sales records show that at least 80 per cent of the farm homes we have contacted with this exhibition truck have bought one or more major appliances from us. Fifty per cent of the homes I solicited bought a major appliance on the very first contact before I drove away."

Although thousands of dealers are discouraged because they have heard somewhere that the appliance market has been saturated, Mr. Brandon says, "Our business is still moving along fine. It is not far under the boom appliance situation of last year, but even at that, it is foolish to compare any year with last year when many consumers anticipated ap-

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pliances going on an allocation basis and bought before they really needed."

He went on to explain that it is ridiculous to say that farmers who have only recently secured access to electric power and have to buy everything from scratch are overstocked on electric equipment. The average farmer has five times as much need for electric service as the average city home, and he is not going to buy everything at once.

Raising more vegetables than anyone else, he uses more refrigerators and freezers. He needs more washing equipment, more cooking, more food processing, more electric milkers, milk coolers, power machines—and the end is not yet.

When John Huffman's canvasser backs his truck up to a kitchen door and exhibits the electric aids for a more abundant life, he has a sales talk that can shatter sales resistance like nobody's business.

When, for example, he demonstrates a washer to a woman who has been doing her family wash by the elbow-grease and scrubboard method, the appeal is irresistible. When he shows her that the money she has been paying for ice deliveries from somebody's ice factory several miles away will cover the weekly or monthly payments on a new refrigerator, it isn't much trouble to lead her to the dotted line.

"A vast number of the first appliances bought by the farm homes," explained Brandon, "are home refrigerators and washers, because these machines represent the most vital needs. Ranges and other major appliances are sold to the same buyers in the months after the lines have been built and they have gotten the feel of what each new piece of equipment means in the way of better living."

Unlike most country canvassers, the Huffman salesman never leaves a washer or refrigerator for free trial. Ordinarily he doesn't require a customer to make any cash payment to hold a machine for later delivery. The dotted line signature is all that is necessary.

"I attended a convention of dealers," said Brandon, "and when I told our factory representative that I had 69 orders on my books for appliances to be delivered as soon as the power lines were built, he asked how much I had collected to secure these orders.

"When I told him I didn't have a cent, he replied, 'You just haven't any orders!' When I told him that the average farmer's word was as good as his bond, he still believed I had a lot of disillusionment ahead when I was ready to deliver.

"Actually, only one of these 69 farmers failed to take up his order, and the exception was a farmer who was also a life insurance salesman. A rival appliance dealer offered to buy a $5,000 policy from the farmer if he in turn could sell him his appliances. In that case, of course, I gladly released him."

Unlike many other country salesmen, the Huffman seller in canvassing the countryside doesn't deliver any appliances to the buyer out of his demonstration truck. They are kept strictly for demonstration. But if the prospect buys, he can have delivery made in a matter of minutes directly from the Shelbyville store.

Each appliance is actually sold without any free trial strings. Mr. Brandon says the average sale guarantee makes the free trial offer unnecessary if it is properly explained to the customer. While admitting that a free trial frequently puts over a sale that might otherwise be lost, Mr. Brandon believes that as far as the Huffman firm is concerned, it has saved itself enough free trial headaches to offset the advantages.

"The guarantee assures the buyer that the purchase is no sale if the machine doesn't do the work claimed for it," says Brandon. "Therefore, what is the advantage of a free trial when all the buyer has to do is to give the dealer a ring and get a service man who will either make it work or deliver another machine?"

When the Huffman firm sells a first-time REA customer, they expect to hold her for repeat busi-

ness. Besides contacting her at intervals with repeat visits of the demonstration truck, Mr. Huffman arranges the hangover payments so he will see her often.

"While we finance all our sale contracts through a finance agency," explained Brandon, "we arrange for the customer to make her weekly or monthly payments direct to us. This brings her into the store every week or month and gives her a chance to see something else she needs.

This arrangement has enabled us to make a large number of store sales that would never have reached us if the buyer had carried her installment payments to some bank or collecting agency on the other side of town.

"Because of this arrangement we prefer to sell on terms rather than for cash. We are always sorry when a term-pay customer has paid up. When she no longer has to visit us with her payments, some other dealer may get her. For that reason we try to keep selling her enough merchandise to keep the account alive.

"Another reason we collect on our own sale paper is that when a customer runs into temporary financial difficulties and has to postpone a payment, we can give her a gracious extension and hold her patronage. The finance agency is more directly interested in collecting than in making new sales."

Trade-in appraisals

(Continued from page 86)

the prospect to our showroom in his car and close the deal without consulting any *superior.*

The question that many readers will ask is, "How many salesmen take advantage of this privilege to close a deal?"

The answer is, "None."

Why should a man steal from one pocket to put in another? No man can, or should, be held responsible for an error he might make from lack of proper knowledge. The sales manager's job is to school and train his men in the duties they are to perform.

And proper training, as it prepares a salesman to make his own appraisals, also schools him in better selling methods. For you cannot divorce the handling of trade-ins from selling new appliances.

In order to school men on making appraisals, I used a conventional display chart, presented with this article as "How to close the sale," with each step in the procedure condensed to a single chart page.

Servicemen as salesmen

(Continued from page 91)

exceptional value, McMahon points out. They can explain convincingly the cost of reconditioning an old appliance, and why, and they can make an accurate appraisal, provided the new item involved is not in the higher price bracket.

The service men who turn salesmen—Wyatt and Wilson—say they enjoy selling in their chosen lines, but that they must guard against being too technical and using terms the prospect does not understand in any discussion of a new or old appliance.

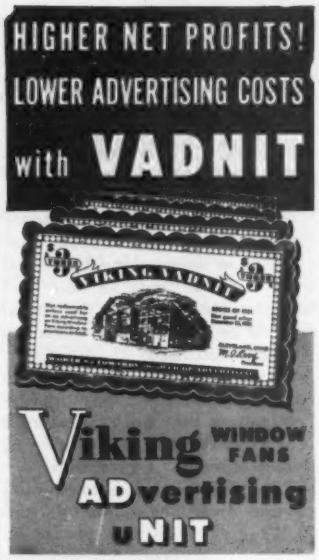
When selling, Wyatt devotes most of his effort to washing machines and Wilson specializes in ironers and stoves, these being their specialties in service. A third service man, Frank Meyer, confesses he is not much at selling and prefers to stick with service, especially domestic and commercial boxes.

Explaining more fully why the plan has been so satisfactory, McMahon related that both Wyatt and Wilson are natives of Cooke county.

"One," he continued, "was raised in the East side of the county, the other on the West side. They know most of the people in their respective sections.

"When they take off on their assigned selling days, they load their trucks with two major appliances they believe they can sell. They seldom come back without selling one appliance. Often they sell both.

"Naturally," McMahon explained, "they know where they are going before they start. And although most of their work is in country territory, they often make sales in Gainesville, for service men in a place of business this size have an opportunity to make notes on appliances in for



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repair. They refer to these notes at the appropriate time."

For Gainesville, with a population in excess of 11,000, McMahon has found that some simple devices are excellent for building store traffic. Furthermore, some of this traffic has been converted into surprising sales.

One traffic builder is an honor system in the rental of floor waxers. These waxers are rented at the rate of 50 cents an hour and the customer specifies the rental amount he or she owes when the waxer is returned.

This policy produces both good will and prospect names. McMahon admits that he is sometimes "stuck," but maintains that being thus victimized is profitable.

This store also does an annual volume of $8,000 in records and $5,000 in electrical housewares. In at least one recent instance the stock of phonograph records produced a handsome and unexpected return through the sale of a new refrigerator to a woman who came in to buy a record.

Another traffic builder is a small stock of hearing aid batteries.

In communities of modest size it is often next to impossible for those handicapped with hearing aids to find fresh batteries. Yet there is no appreciable profit in handling such batteries. One must know, says McMahon, how extensive the stock should be and what types and sizes of batteries should be included. Furthermore, they must be stocked in refrigeration during summer months to prevent deterioration.

But being able to get a battery when needed is a convenience highly appreciated by a minority. This builds more good will of the lasting type and sometimes pays handsomely, too. For another new refrigerator was sold to a woman who came to buy a hearing aid battery.

McMahon has adopted a simple incentive plan for his eight employees. Each month he sets aside a portion of the net profit, the amount being arbitrarily determined, for division among all regularly connected with the business.

Specific canvassing

(Continued from page 93)

specialty men of the company have concentrated on selling teachers, with subsidiary campaigns aimed at lawyers, doctors, accountants, and other brackets of prospects numerous enough to make up a separate classification.

"About the same facts are true of these groups as are with teachers," Mr. Manley said. "For example, most school teachers are dependable, reliable appliance buyers. Their credit is good, each has a fixed income, and many young teachers are getting married, moving out of apartments, and into their own homes.

"A little investigation revealed that a complete list of school teachers in the community is published each fall in local newspapers. This is a ready-made prospect list, which we have followed up carefully by going through the list one by one.

"In every instance," Mr. Manley stated, "our sales percentage has been extremely high. School teachers have been able to provide the down payment demanded by government credit regulations. In fact, we have one man on our staff who specializes in calling on school teachers. He has a wide acquaintanceship in the school administration circles of the city.

"Since the ban against women teachers being married has been removed, there has been a sharp spurt in the number of houses purchased by such families. This means a wide-open appliance market."

Results have not been as impressive in other professional brackets, such as the wives of physicians, lawyers, etc. However, Alabama Home Supply has found that concentration here pays far greater dividends than haphazard contacting of prospects.

"Similar sales presentations work just as well with one professional man as another," Mr. Manley summed up.

Bonus payments

(Continued from page 87)

each month during which a bonus will be offered, and explain the plan thoroughly.

At the same time, we present tips on how the salesman can sell the appliance more effectively. Whenever possible, we have a distributor or manufacturer's representative on hand to add his expert advice. Salesmen leave these half-hour meetings enthusiastic about the job ahead. Invariably they begin getting results immediately.

Another pointer which we think helps to make bonus plans consistently valuable to us, is the salesman's protection plan, which we have exercised for the past four years. (This plan was described in the October, 1951, issue of ELECTRICAL SOUTH.)

Offering the bonus equally for all six salesmen, we have found, works no hardship on anyone on the sales staff. Most appliance stores have several prima donnas who are far more proficient in selling one line of appliances than another.

The man who has a flair for selling television will usually earn

DAVIS
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"WRIST ACTION" CORD SET
Wireless swivel plug turns, bends, swings, spins — eliminates all cord wear, 95% of all cord troubles. Exclusive, patented design. A proven seller. Attractive display card free.
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Finest quality cord and receptacles, including new flush range receptacle. Underwriter's Approved. 220 volt, 50 amperes. Eliminates costly electrical work in connecting ranges.
See your jobber or write direct for full details and prices.
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Southeast Rep.
H. K. Dewees Co.
Walton Bldg., Atlanta, Ga.
Southwest Rep.
M. C. Huie Co.
Thomas Bldg., Dallas, Tex.

a larger bonus payment than the man who has spent most of his life selling washing machines.

However, when the bonus is paid for washing machines, it will be that expert who shows the top earnings. Over a period of a year, bonuses will average out.

Sales from service

(Continued from page 90)

with the distributor-appointed agency is falling down in his obligation to the consumer as well as ruining his opportunity of building up future sales volume. Such a dealer is not long in the appliance business.

The approximate number of certain major appliances which are in use in American homes today is as follows:

Ranges	8,200,000
Washing machines	29,400,000
Refrigerators	33,800,000
Home freezers	2,800,000
Water heaters	4,500,000
Dishwashers	800,000
Waste disposers	800,000

An estimate on my part is that the total number of these units will double within the next ten years depending of course on world conditions.

What dealer could view these figures without realizing the vast dollar volume in service work necessary to keep these appliances in operation—especially during an emergency period with shortages of new appliances; and more important yet, the tremendous volume in replacement sales of which the dealer will obtain his share if he gets his foot in the consumer's door via the service angle.

A prompt and efficient service call offers the best possibility for making a sale on major appliances. Just the other day, the proprietor of a service agency remarked to me that although he was exclusively service, he was continually called by customers who were so satisfied with his service that they were almost insistent on buying new appliances through his shop.

Strange as it may sound, an aggressive selling operation on major appliances at the retail level can be conducted by the application of nothing but an efficient service operation.

To illustrate this assertion, I would like to describe how one small-town dealer has been operating for years. I happened to hear of this dealer's sales technique long before I even knew he was one of our dealers. In other words, it is not always the brand name or the national advertising that sells the product but the tactics and ethics of the dealer.

It was the year 1931 when a young carpenter and contractor, after losing his all in the crash of '29, looked around for different way in which to earn a living. Without a dime he decided to become a major appliance dealer.

Lacking capital to buy stock, he approached this business from the service angle, finding prospects for new appliances while servicing the old, regardless of brand. He has continued this procedure to this day.

He has no showroom—the barn

Reed

THE QUALITY PACKAGED ATTIC FAN

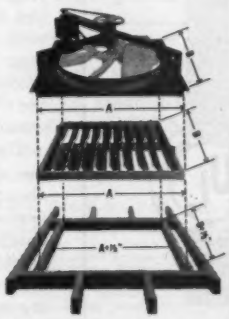
The quality leader in the fan field—year in and year out! REED attic fans are designed with the contractor in mind. Four stock sizes to fit every need . . .

Model RVU-24:
Measurement A—32"
Measurement B—32"

Model RVU-30:
Measurement A—36"
Measurement B—36"

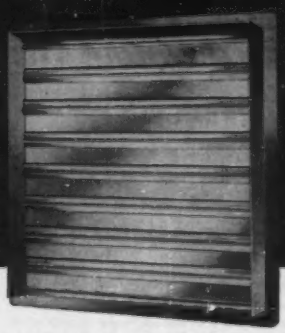
Model RVU-36:
Measurement A—42"
Measurement B—42"

Model RVU-42:
Measurement A—48"
Measurement B—48"



Reed UNIT-FANS, INC.
1001 St. Charles St., New Orleans 8, La.

they all want AIR-FLO



MODEL A-555

THE AUTOMATIC SHUTTER WITH ALL THE FEATURES

FRONT VIEW—CLOSED

IT TAKES THE LOAD OFF THE FAN!

Aluminum louvers open fully, permitting capacity fan operation. New heavy reinforcement strip adds strength and long life to the louvers, assures quiet operation and perfect counterbalance, prevents rattling. Deep shrouds protects shutter from high winds. Tie-rod, brackets and bearings inside frame, not exposed to weather. Special finish resists corrosion. Many other features.

WRITE FOR NEW AIR-FLO CATALOG 43-B
Illustrations and details of the complete Air-Flo line.

AIR CONDITIONING PRODUCTS CO.
2340 W. LAFAYETTE BLVD. · DETROIT 16, MICH.

behind his home is used as a stock room. He has no salesmen—he does all the selling. He has no serviceman—he is it, with a shop in the basement of his home.

While on his rounds of service calls he makes a practice of calling on neighbors nearby who have bought appliances from him in the past to inquire if their appliance is operating satisfactorily, making minor repairs or adjustments at no charge.

Some people call this looking for trouble, but far from it. Such tactics have meant repeat sales continuously to this small dealer. It has been his method for holding his volume year in and year out.

He welcomes service calls so that he may sell. It has meant an average annual volume of $60,000 over the past five years and an average net income of $15,000 per year.

This dealer is not located in a town which is isolated, giving him a near-monopoly, but within a metropolitan area with plenty of competition. He has been capitalizing on service. This may be an extreme example but many large dealers would do well to take a page from this man's book.

Unfortunately, we must combat the unethical practice of selling service during the warranty period on major appliances. The consumer is entitled to free service and free instruction during the warranty period. The dealer's margin in the price of major appliances is such that he can afford to give these services.

If he runs up against real problems, he should call in the distributor service people who in turn can call in the factory field service representative if necessary.

The factory is not cold-blooded towards giving assistance in individual consumer cases to solve difficulties due to product failure or a misunderstanding on the part of the consumer. That is all part of a good factory customer service operation.

When the automobile industry was ready to go after the tremendous volume of business they are now doing, they did not hesitate to spend hours without charge instructing the buyer in the operation of their product. Let's see more dealer sales personnel at our service meetings, as the salesman who has the product knowledge will be the volume builder.

One of the surest ways for a dealer to break down his prestige with the consumer is not to answer a request for service promptly. If he does not handle his own service, it is imperative that he follow through to see that the appointed agency make the call as soon as possible.

You or I would not tolerate waiting a week or even a few days for repairs to our car—why should a consumer be expected to wait for repairs to her range?

The housewife has every right to expect 24-hour service on her major appliances, which are no longer a luxury but a necessity in the home today—especially those needed for the preservation and preparation of food.

Farm customers

(Continued from page 92)

appliance purchase from an appliance retailer and about one-sixth from a hardware dealer. Hardware stores and farm implement or general stores were most frequently mentioned as place of last purchase of production equipment. Appliance stores rated first as the usual place of purchase of lighting and wiring equipment, followed closely by electrical contractors and hardware stores.

Electrical equipment purchases were concentrated in communities of less than 10,000 population, with most families traveling less than 16 miles to make such purchases. Most were satisfied with the location of retailers with whom they made their buys.

They regarded the retailer as the chief source of information about both electrical household appliances, and farm production equipment. The electrical contractor was named first information source for lighting and wiring equipment.

By far the vast majority of farm families surveyed indicated that so far as their electrical prod-

1 2 3
and you're IN
when you sell
State
WATER HEATERS
When your customer sees all THREE State Water Heater models—the Standard, the Low Boy, the Table Top . . . When your customer hears all NINE points which make State as fine as any water heaters at any price . . . When you show that low State price tag . . . Mister, you've made a water heater sale!
No matter what line you stock or plan to stock, it will pay you to investigate State water heaters and the NINE points which make State the easiest water heater in America to sell. Your letter will bring catalogue and the full State Story.
UL
STATE STOVE & MANUFACTURING CO.
509 25th Avenue N. Nashville, Tennessee

ucts needs were concerned, the retailers' sales and promotional efforts left much to be desired. One of the survey questions asked whether the dealer from whom they made their last electrical purchase had solicited further business by mail, telephone, or personal calls.

In the case of household appliance purchases, such solicitation was made in only 48.3 per cent of the cases by direct mail, 5.8 per cent by telephone calls, and 27.6 per cent by personal calls. And 89.6 per cent of those replying to the survey reported that they went to the dealer themselves to make the purchase.

In the case of farm production equipment, the percentage reporting some promotional effort on the part of dealers was as follows: direct mail calls, 53.1 per cent; telephone calls, 9.7 per cent; and personal calls, 26.8 per cent. In this group, 80.3 per cent said they went to the dealer themselves to make the purchase.

The corresponding percentages in the case of purchasers of lighting and wiring equipment were 35.4 per cent, 4.4 per cent, and 18.7 per cent. In this group 72.2 per cent said that they went to the dealer themselves to make the purchase.

Nearly 56 per cent said they bought their last major appliance from a particular dealer because he carried their preferred brand. About 40 per cent cited "service facilities," and more than one-third "past business dealing" or "reputation." Location and friendship for dealer also were mentioned prominently.

Nearly half (48.8 per cent) said they bought their last piece of electrical farm production equipment from the dealer who carried their preferred brand. Forty per cent cited "past business dealing." Also rating high were "service facilities" and "reputation."

"Service facilities" ranked first in selection of the retailer for lighting and wiring equipment. "Reputation" and "location" were just a couple of percentage points away. Brand preference also ranked high.

"Price" and "good trade-in" were mentioned by only one or two per cent as the reason for patronizing a certain dealer in any of the categories.

Nine out of ten of the families said they had bought major electrical appliances in the last five years. About 60 per cent said they had bought electrical farm production equipment during that time. More than seven out of ten reported having bought electric lighting and wiring equipment.

Asked what piece of household equipment they had last bought, about one-third named refrigerators. Other leading items for the home last bought were ranges, washers, home freezers, and water heaters. Nearly 40 per cent said the last piece of production equipment they had purchased was an electric pump. About one-sixth had bought an electric motor. Another one-sixth named a milking machine.

CTI PROPERLY TRAINED MEN HAVE THE "KNOW HOW"

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in
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ELECTRONICS — TELEVISION
Service, Maintenance, Installation

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LOOK AHEAD, PLAN AHEAD — Watch for the March 1952 issue of Electrical South featuring the ES Annual Survey of Electrical Appliance Merchandising Practices.

Many changes have been taking place in the electrical appliance merchandising picture. This special survey issue will accent the changes and highlight the most successful practices. Included in the discussions will be trends in sales training, sales promotion, financing, trade-in policies, service plans, display practices, market analysis, co-operative merchandising programs, and utility dealer co-ordination practices. For information on advertising in this special number write

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Easy Sales! Big Profits!
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Murray COMPANY OF TEXAS
For information, write to:

VENTILATING & WINDOW FANS
H. C. BIGLIN COMPANY, INCORPORATED
177 HARRIS STREET, N.W. ATLANTA, GEORGIA

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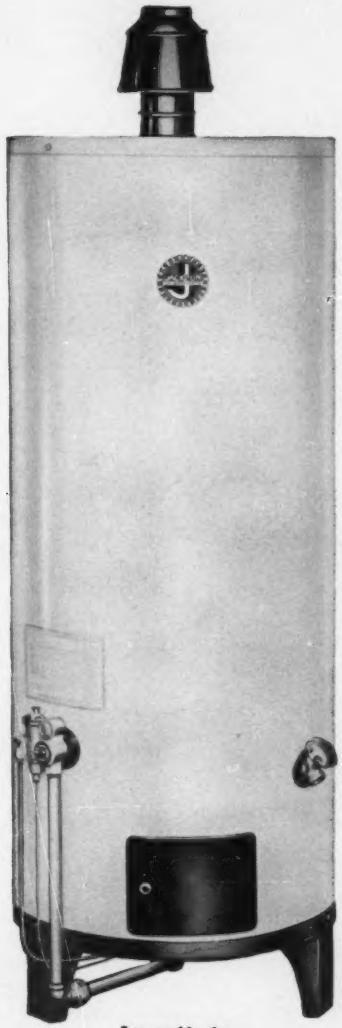
One of America's Leading Lines



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THE TIE THAT BINDS THIS *Famous Family* TOGETHER

What better time than the end of the year for a manufacturer to count his blessings.

To be sure, we at the Westinghouse factories can make all the well-known products illustrated on this page. We can advertise and promote them aggressively. We can build wide consumer acceptance for them. But, upon our loyal distributors and dealers rests the responsibility of translating this acceptance into action and sales.

How superbly well you've done this job is in the record for all to read.

For all you've done we thank you. And along with our gratitude go heartiest holiday greetings.

T. J. Newcomb.
General Sales Manager

WESTINGHOUSE ELECTRIC CORPORATION • ELECTRIC APPLIANCE DIVISION • MANSFIELD, OHIO

For a More Prosperous New Year

YOU CAN BE SURE ...IF IT'S Westinghouse

feature for feature...

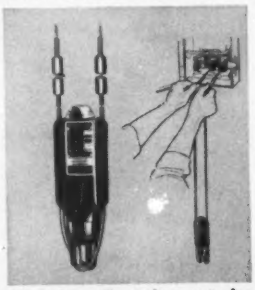
THIS NEW SQUARE D VOLTAGE TESTER

Tops them ALL!

MAGNETIC POLARITY CAP FOR INDICATION OF POLARITY OF D.C. SYSTEMS

Plastic case designed to completely house prods when tester is not in use.

Two-hand testing with one prod inserted in receptacle. Notice complete visibility of scale.



Leads drawn through receptacles for overhead testing. Notice complete eye-level visibility.

PLAINLY MARKED, EASY TO READ, COLORED ETCHED SCALE—VISIBLE UNDER ALL LIGHT CONDITIONS
OPEN FACE "NO FOG" WINDOW FOR VOLTAGE INDICATION
NEW, MODERN DESIGN PLASTIC CASE WITHSTANDS 10,000 VOLTS
30" HEAVY DUTY OIL-RESISTING RUBBER LEADS WITH SHARP STEEL-TIPPED INSULATED PRODS
"RUBBER PANTS" PROTECT LEAD CONNECTIONS TO TESTER

HERE IS DESIGN LEADERSHIP *IN ACTION...*

providing the most convenient, durable, safe, versatile tester in years! Positive voltage identification. No lamps to break or burn out. Only one moving part. So compact it can be carried in pocket—so rugged it can be carried in tool box without damage. No other tester gives you so many usable features.

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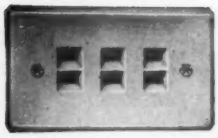
4 important suggestions on G-E remote-control wiring



Switch-controlled Triple Outlet

To help you add extra convenience to remote-control installations, General Electric announces a new switch-controlled triple outlet RO-2 which lets you make any combination of switch-operated and permanently live outlets. Outlet and plate in one piece for easy installation.

New Contractor's Manual

General Electric now has available a complete manual on the remote-control wiring system. In 36 pages, it gives you all the facts on layout, wiring time savers, and important installation facts. Let this booklet bring you up to date on G-E remote control. Write for a free copy of G-E Remote Control Wiring System Manual to Section D56-1224, Construction Materials Division, General Electric Company, Bridgeport 2, Connecticut.

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To explain the advantages and uses of G-E remote-control wiring to your customers and prospects, General Electric has prepared an 8-page booklet. This booklet will help you show customers exactly why and where remote control should be used. For a copy of the Remote Control Consumer booklet and information on obtaining it in quantity, see your G-E Construction Materials distributor, or write Section D56-1224, Construction Materials Division, General Electric Company, Bridgeport 2, Connecticut.

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